

REGULATIONS FOR THE LIBRARY
OF THE
Massachusetts Horticultural Society,
ADOPTED 1861.

ARTICLE I.

All Books, Manuscripts, Drawings, Engravings, Paintings, Models, Furniture, and other articles appertaining to the Library, shall be confined to the special care of the Committee on the Library.

ARTICLE II.

When any books or publications are added to the Library, a list thereof shall be posted up in the Library Room, and all such additions shall be withheld from circulation for the term of one month.

ARTICLE III.

The following Books of Record shall be kept:—

No. 1. A Catalogue of the Books.

No. 2. A Catalogue of the Manuscripts, Drawings, Engravings, Paintings, Models, and all other articles.

No. 3. A list of all Donations, Bequests, Books, or other articles presented to the Society, with the date thereof, and the name and residence of the donor.

ARTICLE IV.

Rare and costly books shall not be taken from the Library Room. A list of such works as are to be withheld from circulation shall be made out from time to time by the Library Committee, and placed in the hands of the Librarian.

ARTICLE V.

No more than two volumes shall be taken out by any member at one time, or retained longer than three weeks; and for each volume retained beyond that time a fine of ten cents per week shall be paid by the person so retaining it. And a fraction of a week shall be reckoned as a whole week in computing fines.

ARTICLE VI.

Every Book shall be returned in good order (regard being had to the necessary wear thereof with proper usage), and if any Book shall be lost or injured, the person to whom it stands charged shall, at the election of the Committee on the Library, replace it by a new volume or set, or pay for it at its value to the Society.

ARTICLE VII.

All Books shall be returned to the Library for examination on or before the first Saturday in July, annually, and remain until after the third Saturday of said month, and every person neglecting to return any Book or Books charged to him as herein required, shall pay a fine of twenty cents per week, for every volume so retained. And if at the re-opening of the Library, any Book shall still be unreturned, the person by whom it is retained shall pay for the said Book or set, as provided in Article VI, together with any fines which may have accumulated thereon; and a notice to this effect shall be forthwith mailed to him by the Librarian.

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No member shall loan a book to any other person, under the penalty of a fine of \$1.00.

ARTICLE IX.

When a written request shall be left at the Library for a particular Book then out, it shall be retained for the person requiring it, for one week after it shall have been returned.

ARTICLE X.

Every book shall be numbered in the order in which it is arranged in the Books of Record, and also have a copy of the foregoing regulations affixed to it.

PARK AND
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VOLS. 7 & 8
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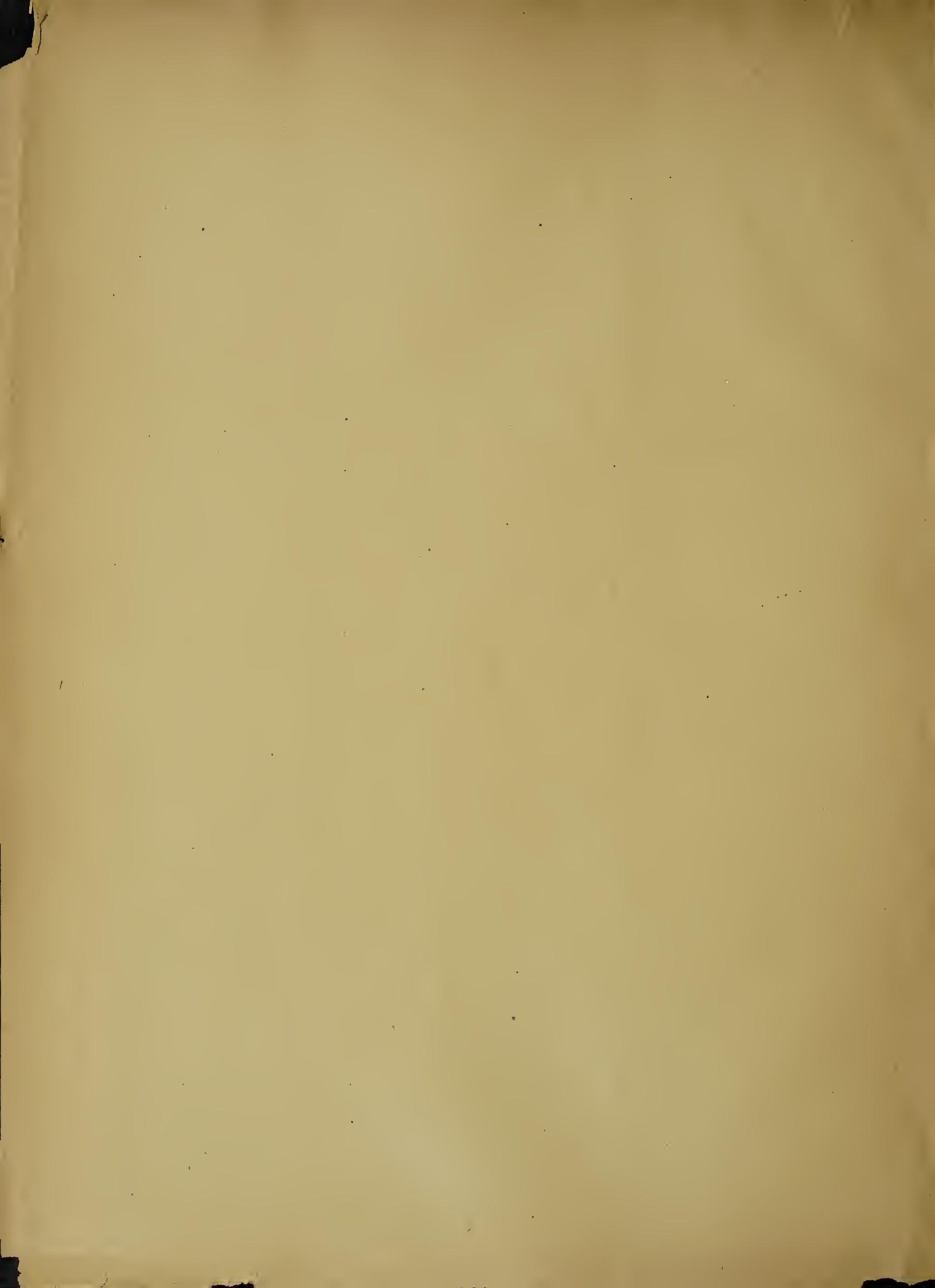
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PARK AND CEMETERY.

INDEX TO VOLUME VII.

MARCH, 1897—FEBRUARY, 1898.

A

- A Beautiful Garden..... 154
*A Church in Rural England, St. James, East Cowes, Isle of Wight. 189
*Actual Cost of Cemetery Improvements..... 226
*A Freak of Nature..... 56
A Half Hour with Insects, Injurious and Beneficial..... 192
*All Summer Effects..... 8
*A Model Residence Street..... 230
An Ideal Spot 84
Annual Flower Show, Chicago..... 218
A Remarkable Rose Tree..... 57
Arbor Day in the United States ... 26
*A View in Ridgewood Park, Brooklyn..... 183
*A Village Made Beautiful—A Reclaimed Swamp 34

B

- *Bloody Angle, or High-Water Mark, Gettysburg..... 132
Bulbs for the Cemetery 39
*Burial Place of Two American Generals..... 48
Butchering Trees..... 144

C

- Cemeteries—
*Cemeteries in Ozark Mountains.. 186
*Cypress Lawn Cemetery, San Mateo County, Cal..... 82
*Ferncliff Cemetery, Springfield, Ohio..... 250
*Forest Hill Cemetery, Kansas City, Mo. 269
*Harleigh Cemetery, Camden, N. J. 138
*Lakewood Cemetery, Minneapolis, Minn..... 164
*National Cemetery, Antietam, Md. 253
*National Cemetery, Gettysburg, Pa.... 104
*North Burial Ground, Providence, R. I. 207
*Oakdale Cemetery, Wilmington, N. C..... 210
*Oak Grove Cemetery, Delaware, Ohio..... 10
Cemetery Adornment..... 67
*Cemetery Development..... 6
*Cemetery Improvements. 153
Cemetery Notes..... 22, 46, 69, 96, 122, 148, 174, 200, 220, 240, 260, 280
Cemetery Topics. 113

Cereal Plant Crossing..... 217

- Change of Color in Leaves..... 218
Christ Church Graveyard, Alexandria, Va..... 142
Chrysanthemum Display, Fairmount Park, Philadelphia, Pa..... 272
Cincinnati Convention of the Association of American Cemetery Superintendents..... 127, 156
*Colonel Wooldridge and His Graveyard. 255
*Columbarium, San Francisco, Cal. 93
*Common Shrubs..... 41
Commercial Trees..... 238

Correspondence—

- A Cemetery Question..... 97
A Legal Point..... 70
A Plea for "Landscape Architect." —Street Tree Planting..... 47
Association of American Cemetery Superintendents..... 124
Cemetery Methods at the Grave... 123
Convention Echoes — Returning from the Convention — After Thoughts..... 221
Keeping Up to the Times..... 261
Politics in the Parks..... 70
Some General Questions on the Cemetery..... 70

Teaching Workmen..... 123

- The A. A. C. S. Convention..... 149
The Omaha Convention of the A. A. C. S..... 241

What Shall We Do with Our Dead?

- *Crematory, Forest Home Cemetery, Milwaukee, Wis..... 170

D

*Depot Grounds at Lake City, Minn. 185

- *Design for a Side Hill Vault..... 198
Destroying Cut Worms..... 233
Disposing of the Dead in the French Congo..... 104
*Drinking Fountain, Chelsea, Mass. 42
Duties of a Gardener..... 174

E

Editorial—

- Appropriateness of Monument Sites 264
Arbor Day 25, 50
Art in Fairmount Park 99
Cemetery Improvement. 74
Convention of Park Commissioners 49
Convention of the A. A. C. S. 125, 151
Decoration Day..... 49
Eccentric Memorial Work..... 223

Funeral Reform..... 223

- Garden Plants—Their Geography. 204
Memorial Monuments..... 100
Outdoor Improvement..... 263
Park and Out-Door Art Association 74
Parks and Politics. 1, 263
Park Commissioners..... 50
Public Monuments..... 152
Public Monument Sites..... 223
Small Parks..... 125, 151, 223
Sunday Funerals..... 204, 243
The Adornment of Cities. 25
The Field of PARK AND CEMETERY I
The Jersey City Soldiers' Monument..... 204

The Necessity of Art Commissions 74, 177, 244

- The Potter's Field..... 99
The Progress of Park Development 264
The Trolley in the Cemetery..... 178
Village Improvement Societies. 152

Winter's Work..... 178

- Entrance Gates and Lodge, Woodlawn Cemetery, Everett, Mass ... 31

*Evergreens for Dooryards and Walls 245

Excerpts from the Dog-Eared Note-

book of a Traveler and Observer. 127

F

*Fauna of the Catacombs of Paris... 61

Floral Clocks..... 53

Flower Show of the New York Gar-

deners' Society. 214

*Foliage Bed..... 66

*Foliage Bed at Weinburg, Switzer-

land. 142

*Foliage and Flower Bed, Lahr, Ba-

Foresight in Gardening. 171

varia..... 278

Forestry on the Vanderbilt Estate,

Biltmore, N. C. 211

Forming State Associations of Ceme-

tary Officials. 101

G

Garden and Park Improvement.... 27

*Garden Plants—Their Geography—

The Genesta, Rosa and Drosera Al-

liance. 16, 36, 62, 86, 108

The Rhizophora, Myrtus and Gno-

thera Alliance. 134, 166

The Mentzelia, Passiflora and Be-

gonia Alliance. 190

The Echinocactus, Opuntia and

Mesembryanthemum Alliance

.... 212, 236, 254

The Hydrocotyle, Aralia and Cor-	
nus Alliance.....	274
*G. A. R. Memorial, East Liverpool,	
Ohio.....	208
*Gateway and Offices, Woodmere	
Cemetery, Woodmere, Mich.....	80
Graves of Winnebago Indians. .	251
*Group of Aralia Spinosa in Fair-	
mount Park, Philadelphia.....	215
*Herbaceous Paeonies.....	84
Herbaceous Plants.....	60

I

Influence of Beautiful Streets Upon	
Public Health	227
Influence of Steam Travel on the	
Garden.....	100
Instructive Parks and Cemeteries...	126

J

Japan Lily Disease.....	211
-------------------------	-----

L

*Ladies' Lavatory, Prospect Park,	
Brooklyn, N. Y.....	38
Landscape Gardener and his Work.	3
'Lawn Weeds.....	92
Legal—	
A Nebraska Bill	149
Cannot Remove Bodies from Lots	
Not Paid for.....	258
Cemetery Land Law.....	71
Cemetery Organization Legalized	
Executor Alone Liable for Monu-	
ment.....	71
Minnesota Cemetery Laws.....	97
Right to Visit and Care for Ceme-	
tery Lots.....	97
Right of Access to Cemetery Lot.	149
LeNotre, The Gardener.....	20
Louisville Meeting of the Park and	
Out-Door Art Association.	75

M

Medicinal Plants.....	133
*Memorial Flower Service.....	102
*Memorial Gateway, Monson, Mass..	57
Michigan's Early Wild Flowers. 89, 118	
Monuments—	
*Chapman Monument, Forest	
Home Cemetery, Milwaukee,	
Wis.....	155
*Clay Monument, Lexington, Ky..	247
Column of Victory, Berlin.....	5
*Cross Monument..	277
*Dedication of the Grant Monu-	
ment	8

*Famous Monuments of Berlin....	140
*Lovejoy Monument at Alton, Ill..	195
*Memorial Sculpture.....	107
*Olc Bull Monument, Loring Park,	
Minneapolis, Minn.....	120
*Peter Cooper Memorial, New	
York City.....	129
*Prince Henry of Battenberg's	
Tomb.....	88
*St. Gauden's Statue of General	
Logan, Chicago.....	161

O

*Office Building, Riverside Ceme-	
terry, Norristown, Pa.....	136
*Office of the Riverside Cemetery,	
Cleveland, O.....	188
Old King Solomon.....	106
Onondaga County Cemetery Asso-	
ciation.....	265

P

Park Design and Park Planting....	75
Park Notes.....	21, 45, 68,
95, 111, 147, 175, 199, 219, 239, 259, 279	
Parks—	
*Battersea Park, London, England	232
*Cascade Park, New Castle, Pa...	228
*Feature of Park Development, Cam-	
bridge, Mass.....	266
*Glimpses of Finsbury Park, Lon-	
don, England.....	64, 160
*Louisville Park System.....	32
*Notes From Tower Grove Park,	
St. Louis, Mo	58
*Parks of Omaha, Neb.....	248
*Prospect Park, Brooklyn, N. Y..	162
*The Common, Leicester, Mass...	14
*Washington Park, Albany, N. Y.	103
*Peterhof Palace, Russia.....	256
*Planting of Roads and Avenues....	30
Plants of Spontaneous Growth.....	168
*Plaza, Alameda and Paseo in the	
City of Mexico.....	51, 93, 115
Prizes for School Gardens.....	246
*Proposed Park at Austin, Minn....	216
*Prospect Park, Brooklyn, N. Y.....	162
Public Gardens and Squares.....	196
Publisher's Department.... 24, 48, 72,	
98, 124, 150, 176, 202, 222, 242, 262, 282	

R

Rapidity of Growth in the Oaks ...	272
*Receiving Vault, New Bedford,	
Mass.....	256

Reform Club, New York City.....	8
Relation of Birds to Horticulture...	206
*Residence Streets. 152, 179, 204, 244,	
Road Making.....	233
Roses for the Cemetery.....	35
*Rostrum, National Cemetery, Get-	
tysburg.....	169
*Rural Lanes of England.....	12

S

*Scotch Thistle.....	112
Some Commercial Woods of Aus-	
tralia.....	146
Some Early History of the Parks of	
New York City.....	80, 130
Some Handsome Michigan Annuals	143
Some Native Plants.....	174
*Some Notable Public Monuments	
Unveiled.....	78
*Some Recent Memorial Fountains.	252
Some Reflections Upon Mexican	
Burial Places.....	234
Steam Lawn Mower.....	175
Summer Pruning of Trees and	
Shrubs.....	67
*Supply Wagon for Foundations in	
Cemeteries	225

T

*The Hunt Memorial	29
*The Hercules Bridge, Berlin.....	276
The Ideal Park Superintendent....	116
The Largest Marine Plant.....	144
The Mistletoe Bough.....	246
The Term "Landscape Gardener" ..	20
*Tomb of Orleans Family.....	181
Transplanting and Dividing Her-	
baceous Plants.....	144
Tree Planting.....	66
Tree Planting Associations.....	2
Trimming Trees.....	106
*True Outlines in Curved Drives...	65
Two Founders of Modern Garden-	
ing.....	90

V

Value of Improvement.....	178
Village Improvement.....	11, 50, 74

W

*Water Lilies.....	43, 56
*Wayside Planting.....	268
*What are the Fundamental Con-	
cepts in Landscape Gardening....	226

PARK AND CEMETERY.

Devoted to Art Out-of-Doors,—Parks, Cemeteries, Town and Village Improvements.

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CONTENTS.

EDITORIAL—GREETING—POLITICS AND PARK WORK—PROPOSED WASHINGTON MONUMENT, CHICAGO.....	1
TREE PLANTING ASSOCIATIONS.....	2
THE LANDSCAPE GARDENER AND HIS WORK.....	3
*COLUMN OF VICTORY, BERLIN.....	5
*CEMETERY DEVELOPMENT.....	6
REFORM CLUB, NEW YORK CITY.....	8
*ALL SUMMER EFFECTS IN PLANTING.....	8
*OAK GROVE CEMETERY, DELAWARE, O.....	10
VILLAGE IMPROVEMENTS.....	11
*RURAL LANES OF ENGLAND.....	12
*THE COMMON, LEICESTER, MASS.....	14
*GARDEN PLANTS, THEIR GEOGRAPHY, XVI.....	16
LE NOTRE, THE GARDENER.....	18
THE TERM LANDSCAPE GARDENER.....	20
PARK NOTES.....	21
CEMETERY NOTES.....	22
PUBLISHERS' DEPARTMENT.....	24

*Illustrated.

WITH the present issue this journal begins its seventh annual volume, and takes a longer stride into the broad field to which the scope of its appointed work surely points. Simultaneously with the rapidly growing sentiment regarding the establishing of parks and the improvement of cemeteries, appears the necessity of a general betterment of our natural surroundings. The very fact of the exhilarating and elevating influences which improved landscape work in our parks and cemeteries exercise over the community, indubitably points to the necessity of improved landscape effects in our door yards, streets and public places, to maintain the influences induced by the beauty of the parks, and thus help to bring man more in harmony with nature and nature's God, as a permanent condition. To this end all the spirit of landscape effects tends. It is a leading influence in the higher education of man, and has manifested itself on the human family through all the ages. Landscape

art is a field in which the brightest minds and the highest intelligence has found ample scope, and its fair representation in journalism is a work to be conducted with the greatest care and broadest intention. Appreciating its requirements, it is and has been the aim of this journal to invite the co-operation of men who have become well known in this line of work, and in this connection on another page will be found the names of several eminent authorities on landscape art and its related interests, who will contribute in forthcoming issues.

A NEW administration in the State of Illinois brought about changes in the West Park Board of Commissioners of Chicago, and a discussion has arisen in that body relative to the selection of a superintendent. Politics and political methods never yet helped art out of doors or art indoors, and a park superintendent should be appointed solely for his professional ability in park work. In a park of any magnitude a man of large experience is indispensable, and this experience must cover both a high order of landscape art and the executive ability to economically carry along both the work of improvement and that of maintenance also. The art of the landscape gardener is absorbing, and like the other leading professions its votaries have little time to cultivate politics. It is to be hoped the West Park Board of Chicago will not make so important an appointment from motives utterly at variance with a park's best interests.

A PROJECT is on foot to erect by public subscription a statue of George Washington in Chicago, the proposed cost to be \$25,000. Chicago as yet possesses no monument to the Father of his Country, although a delightful memorial in the way of Washington Park. Lincoln is already commemorated in Lincoln Park by a beautiful work in bronze by St. Gaudens, and a bequest of the late John Crerar of \$100,000 should provide another and more magnificent memorial to the "Liberator." Under these circumstances the amount of \$25,000 is quite inadequate to provide a suitable monument of Washington, which should be a memorial pretentious enough to invoke the highest artistic skill, and worthy to be compared with the proposed Lincoln monument, as well as do credit to the great city and its progressive sp

A PAPER devoted especially to the interests of parks, cemeteries and in a general way to the beautifying of all outdoor space where planting can be done, should have something to say with regard to the men whose business it is to design and carry out work connected with these places. We are, therefore, glad to publish in another column an article on the landscape gardener and his work. We believe it is unfortunate that the men engaged in this work have adopted a number of different names for their profession and hope the time will come when "landscape gardener" will be used as a matter of course, just as "architect" is used by men who design buildings. We give in another place some remarks on this subject quoted from Prof. Bailey's writings in "*American Gardening*" for the year 1893. That there is an increasing interest taken in landscape beauty must be acknowledged by all and we earnestly hope the time will come when "art out of doors" will receive as much attention as is now given to architecture and painting.

TREE PLANTING ASSOCIATIONS.

Tree planting associations organized on broad lines, and containing the energy necessary to maintain a continued effort in spite of discouragement and lack of co-operation, must in time effect improvements in our cities and villages, beneficial to all interests, from the enlightened motives which inspire the work and the happy results of the work accomplished. Several associations have been organized and they are meeting with fair success, even in the troublesome times which have marked the business condition of the country for years past. And it may reasonably be expected that when the normal condition of business prosperity again becomes a settled fact, such efforts to improve and add more of nature to our city life, will receive an impetus which will result in adding charms to our surroundings, increasing year by year as cities grow older.

At this time we note especially the associations in active operation in Brooklyn and New York.

Brooklyn.

The Tree Planting and Fountain Society of Brooklyn, has been in operation for some years, and is now gaining rapidly in public favor. It is receiving greater support from the authorities and the results of its work have justified a keener sympathy with its efforts from press and public.

The objects of the society as recorded in its constitution is to "promote the planting and protection of trees, the erection of drinking fountains, and otherwise to render the city of Brooklyn attractive."

In educational work it has published and distributed among its members and others a fund of information on trees in general for city use, their care, requirements, habits, and even cost and business details connected with their planting in the city thoroughfares. The secretary of the society, Mr. Lewis Collins, appears to have been not only zealous in the work but most active, and has been the means, undoubtedly, of making Brooklyn one of the best informed cities on arboriculture in the country.

One of the chief features of the work of the society is the fostering and encouragement of local improvement clubs, which may be organized to include a block, a street or district of greater or less extent. In relation to this the secretary says: "The organization should be permanent. The objects are refining and ennobling in their influence. They are worthy the attention and support of the highly cultured. An opportunity is offered for a display of taste, etc."

The society has issued a number of pamphlets and circulars. It has also developed arrangements for supplying its members and the members of its auxiliary clubs with the required trees, and planting and caring for the same, and is rapidly extending an influence that must be beneficial to all interested. The society maintains offices at 44 Court Street, Brooklyn, with the secretary, or someone competent to advise, in attendance, during office hours.

New York.

The Tree Planting Association of New York City, organized with the object of encouraging the planting of trees on the residential streets and in the tenement districts, is under the presidency of Mayor Wm. L. Strong, with W. A. Stiles, Park Commissioner, secretary, whose office is in the Tribune Building of that city. The society is aggressively active, both in the efforts to promote the organization of local clubs, and in the actual work of inducing the planting of trees where such will be a benefit and improvement. The society has also exercised a business activity in effecting arrangements with local nurserymen for the supply, planting and care for a certain time of desirable trees on stipulated terms.

The work of the societies in the two cities named will afford ample demonstration of the good that can be accomplished by such organizations, and their work and experience is readily available for similar work anywhere and everywhere. No one acquainted with the aspect of a treeless town, as compared with that of one adorned with healthy avenues of trees, will question the advantages of the latter condition even from a utilitarian standpoint.

THE LANDSCAPE GARDENER AND HIS WORK:

The term "Landscape Gardener," instead of "Landscape Engineer" or "Landscape Architect," is used here because it is believed by the writer to be the most suitable to convey the meaning intended. When one considers engineering in connection with landscapes, instead of thinking of any artistic production, he is more apt to think of the scars along mountain sides, of the destruction of beautiful scenery along river banks, of the changing of water courses into sewers, of railway embankments, canals and dams. The term "architect" brings to mind a man who aims to design artistic structures. His materials are stone, brick, the various metals, wood, glass, paint, etc. If "Landscape Architect" had not been used by some of the foremost landscape gardeners in this country one would imagine it to designate a man who designed summer houses, pavilions, balustrades, fences, hedges and things with stiff and formal lines. Indeed, the very men who now use this term at first protested against its use, but it was forced upon them. On the other hand, the term Landscape Gardener has first, "landscape," which as defined by Hamerton must necessarily be an artistic portion of the earth's surface, and then "gardener," which indicates that the materials used will be those found in a garden. The objections made to this term come primarily from those who regard a garden as a place in which to raise vegetables for the kitchen, but garden meant originally a place that gave pleasure by the arrangement and beauty of its trees, shrubs and flowers. Perhaps it corresponded most nearly with our ideas of the Garden of Eden before we had read Darwin. Mrs. Van Rensselaer has very happily called the pleasing effects produced by judiciously arranged masses of foliage, flowers, lawns, water and varied land surfaces, "Art Out of Doors." To become acquainted with the principles and literature of this art one must read what Repton, Loudon, Downing, Kemp, Robinson, Olmsted, Parsons, Mrs. Van Rensselaer and others have written on landscape gardening. So far as I am aware no one has yet written a book on landscape architecture.

What are the attainments of a skillful landscape gardener? He follows a fine art which appeals to the eye and has to do with what we see from our windows and from our carriages or bicycles as we pass along residence streets, boulevards and parks. His art applies to any outdoor scenery which can be affected by the hand of man. It is of the first importance, therefore, that he know how to arrange the ground surface, the trees, shrubs and other plants, the ponds and streams, the points of view and the open spaces or vistas, so that the general effect

will be pleasing, not necessarily to the public, but to the most cultured and artistic people. No matter how great his knowledge of soils, of drainage, of road construction and of the structure and characteristics of the various species of plants may be, if he fails to make an artistic arrangement he is not a landscape gardener.

Next in importance to a knowledge of arrangement comes the ability to produce a result which, with a reasonable amount of attention, will continue to improve with added years of growth. This ability will rest in part on an acquaintance with the habits and life history of the plants used and of the situations to which they are adapted.

The proper location of the points of view will require a study of the relations of buildings, drives and walks to the landscapes. Where the landscape is an important feature the landscape gardener should work with the architect in the preparation of the preliminary sketches. Unfortunately architects frequently design residences and other buildings without any regard to the site and the characteristic features which may have attracted the owner. Cases are not unknown where houses have been so designed and placed that the kitchen and servants' rooms shut off the very best views from the family living rooms.

A landscape gardener should be skilled in what Mr. Olmsted calls "the anatomical plan." He should not only be able to place drives where they will command good views while not interfering with the landscape, but he should know how to place them so they will be convenient, have easy grades and proper drainage and how to construct them in a durable manner with a satisfactory wearing surface. He should know how to economize in regard to space and cost of the work coming under his direction. While he should have no pecuniary interest in any work that is carried on—that is, should have no interest in any nursery or greenhouse, or act as agent for any firm—he should usually purchase the material furnished by nurserymen on account of his knowledge of what is required, the prices that should be paid and the standing of the various nursery firms. He will often be able to save an owner several times the amount of his fees by his knowledge of the value of plants. His work should commence with a study of the adaptability of a given piece of ground for the purpose intended, especially when that purpose is the making of a park, a botanic or public garden, a cemetery, home grounds or the location of a public street. The ground in question may have features which would be of great importance in the design to be worked out, such as an important view of a large body of water, a valley or a distant stretch of coun-

try, a grove of trees which would require many years to grow, a rocky ledge, a steep bluff or a ravine, or it may lack valuable features which could be secured by the selection of another piece of ground. When the site is finally selected a thorough study should be made of its characteristic features and of all the surroundings, and after such study the landscape gardener should have as clear a conception of the effect he wishes to produce, of its appearance when the first planting shall have been done, when one, two, three, ten years have elapsed, as a painter has when he begins work on a canvas. Not only that, but he should have in his mind the various effects of spring, summer, fall and winter.

Having made his design and perhaps sketched it on paper ("perhaps," because a sketch is not always necessary, and there are cases in which the best result will be produced by working directly on the ground), he proceeds to execute it just as his brother artist proceeds to paint a picture, but instead of putting a background on canvas he shapes the actual ground, mixing with it compounds of nitrogen, potash, phosphorus, etc., which, dissolved in the rain by the aid of the warmth and light of the sun, will afterwards produce the desired colors. The landscape gardener, however, does not select his colors directly. He has ten thousand servants to help him. If he wishes a dark green carried up from a given place on the ground he chooses a maple, or if the green is to continue through the winter he chooses a pine as his servant to gather the materials already found or placed in the ground. If he wishes a red in winter he chooses a dogwood, which will put this color in its bark, or if he wishes a red in summer he chooses a rose. To be sure the servant must breathe the surrounding air while doing the work required. By choosing the right number and kind of such helpers a great mass of color may be carried high into the air, or spread out on the ground like a carpet. The colors may be varied from time to time, or bits of one color may be scattered upon another. Choosing the right servants is not always an easy task, but each one performs with marvelous skill the work he or she is able to do. If supplied with proper materials the details will be wrought out to perfection by these servants. There is no impressionistic work. Whether the living picture, as a whole, will be satisfactory or not will, however, depend upon the choice made by the landscape gardener, provided his supervision is continued for a long enough time. The continued supervision is required because it takes time—in some cases years—for the servants mentioned, the various trees, shrubs, vines and herbaceous plants to do their part in making the picture. More are needed at the commencement than are needed later. They

are not large or strong when first assigned their places. Some may become sick or they may crowd their neighbors. The owner of a place or his man in charge, or the superintendent of a park, may have failed to grasp the features of a design, and so have made changes detrimental to the final result. Few of the members of the profession, to say nothing of the clients, have appreciated the importance of an oversight extending through a series of years. The architect's work is finished with the completion of a building; the painter's when he puts his last touches on a canvas, but what a landscape gardener must have in mind is not a single picture, but a series of pictures having more or less resemblance to each other, changing more rapidly with the first than with the later growth, and needing from time to time the inspection and criticism of a trained eye. This inspection may be made by visiting a place once a year, once a month, or even more frequently, as may be agreed on with the client, but it should not be omitted.

Perhaps no work of an artistic character requires a broader knowledge than that of landscape gardening. It calls for some acquaintance with engineering, architecture, principles of designing, horticulture, botany, the adaptability of different plants to various climates and soils, their appearance, their rate of growth, their length of life and the social habits of the people to whom they will give pleasure. Of course his knowledge of engineering or architecture will not be as extensive as that of men engaged in those professions, but it will be such as will enable him to bring into a harmonious whole the bridges, buildings, etc., and landscape.

What compensation will a landscape gardener receive for his work? In the first place he will enjoy the beauty of nature far more than most men. He will also get much pleasure from his work. He will have a chance to get the pure, clear air of the country, to take walks through the woods and over fields. These are important considerations, but he must also receive money and have a basis for his charges. It takes as much natural ability and as much time spent in study to become proficient in his profession as it does to become a good lawyer, a good physician, a good engineer or a good architect, and his pay should equal theirs. Moreover, he must travel and see what others have done in other cities and countries, and he should give special attention to what nature has done. This requires both time and money. The percentage charge made by architects is not applicable to landscape work. A fee determined by an estimate of the time required in making a design is usually most satisfactory, or an agreement may be made to charge a certain amount by the day, the month or

the year. The subsequent supervision should be a separate matter from the original design and execution of the work. If an agreement for a given amount per year is made for supervision, the landscape gardener will feel more free to inspect the work as often as he may deem advisable than if he charges for each visit. His income should increase with his skill and experience, just as that of a lawyer increases when his ability is demonstrated by his practice, or the charges of a painter increase when the critics recognize the merit of his productions.

The foregoing brief outline may be more briefly summarized as follows: 1. The term "Landscape Gardener" has the prestige of more than a century's use, and seems in every way preferable to "Landscape Engineer" or "Landscape Architect." 2. A Landscape Gardener's work consists in a preliminary study of the ground with reference to the purpose for which it is to be used; the preparation of a design intended to produce an artistic effect by arranging the trees, shrubs and other plants so that they will form a pleasing combination with the buildings, distant views or other features of the site and a supervision of the planting until the character of the place is established. 3. The charge for a design should be a stated amount agreed upon between the landscape gardener and his client, and an agreement should also be made with regard to subsequent supervision.

In conclusion it may be well to state that the best result will only be attained when the client has an intelligent appreciation of what is aimed at by the landscape gardener, and is in full sympathy with him.

O. C. Simonds.

COLUMN OF VICTORY, BERLIN.

In a certain sense the Column of Victory, erected early in the 70's to commemorate the three recent wars in which Prussia was victorious, and which have led to her present greatness, is a fitting precedent to the national monument just now erected in honor of the Prussian king and first German emperor, who was the leading figure in these achievements. This Column of Victory is 136 feet high. It is of bronze, and its crenelated body is flanked and decorated in three rows by bronze cannons taken from the Danes (1864), Austrians (1866) and French (1870-71) during those three campaigns. Above the column rises the colossal statue of the Goddess of Victory, of bronze and very heavily gilded, so that at its altitude it serves as a point visible from afar in almost every quarter of the city. Around the lower and broader part of the column runs a colonnade made of polished granite, and around the column, inside the colonnade, are a series of fresco paintings glorifying vic-

tory. The foundation, forming a square, is a piece of polished granite, but of a darker shade, and three of its sides bear bronze reliefs showing the memorable events in the three wars spoken of—the storming of the Duppel Works, the day of Sadowa, and the Battle of Sedan, with the triumphal entry into Berlin of the returning hosts in the spring of 1871. Granite stairs form the approaches from every side. The location of this Column of Victory is excellent, for it rises in the midst of a park-like space, having



COLUMN OF VICTORY, BERLIN.

the new Reichstag building on one side and the Thiergarten on the other. The column itself is, of course, hollow, and there is a narrow winding stair inside leading upwards, enabling visitors to go up and ascend as far as the top of the column, where there is a free space protected by a close bronze railing. The view from there is, weather permitting, magnificent, and that is the reason why nearly all strangers visiting Berlin make it a point of climbing up that winding stair inside to enjoy a bird's eye view of the city. As to the dimensions of the monument, as a whole, I already cited the height of the column, which at its thickest part measures 28 ft. in diam., at its narrowest 13. The width of colonnade is 47 ft., sides of foundation each 59. These proportions are criticised. The column viewed close by appears too thick for its height. In that respect it is inferior to both the Vendome and the Nelson columns.

W. von Schierbrand.

CEMETERY DEVELOPMENT.

The change that is taking place in public sentiment, regarding the care and improvement of our cemeteries, is as marked in the development of its

distinctly suggests that it is a subject, once properly presented, that assumes vital interest, and that a proper understanding of the matter in any community will ensure immediate and practical attention.

The accompanying illustrations are presented as an object lesson in the important work of cemetery development.

The view of the Mohammedan cemetery of Damascus, while it gives the prevailing style of cemetery care among that people, also represents the conservatism and lack of any idea of progress, that allows of little change in the means and methods of centuries. It also very graphically connects the past with the present. There are the regular rows of mounds,

expression as in the changed physical conditions it has been the means of producing. And while there exists as it were a wide gulf between the appearance of the cemetery of the past and that of the present, the degree of this advanced development is practically only the work of a few years.

To change old and well established ideas, the work of centuries, however ill conditioned for a more progressive age, requires persistent effort; but to eradicate deep rooted prejudices, in a measure protected by old time superstition, makes the necessity of careful education paramount. This in itself would generally suggest that progress will be slow.

But the nature of the American people, the advantages they have enjoyed and the wondrous resources at their command, have hastened an otherwise slow and difficult process, and the manner in which the cemetery question is being taken up in so many localities,

exaggerated of course; there is the stone yard, with here and there a monument more pretentious than its fellows; there is the monotony of its symmetry, and many of its features, exaggerated though they

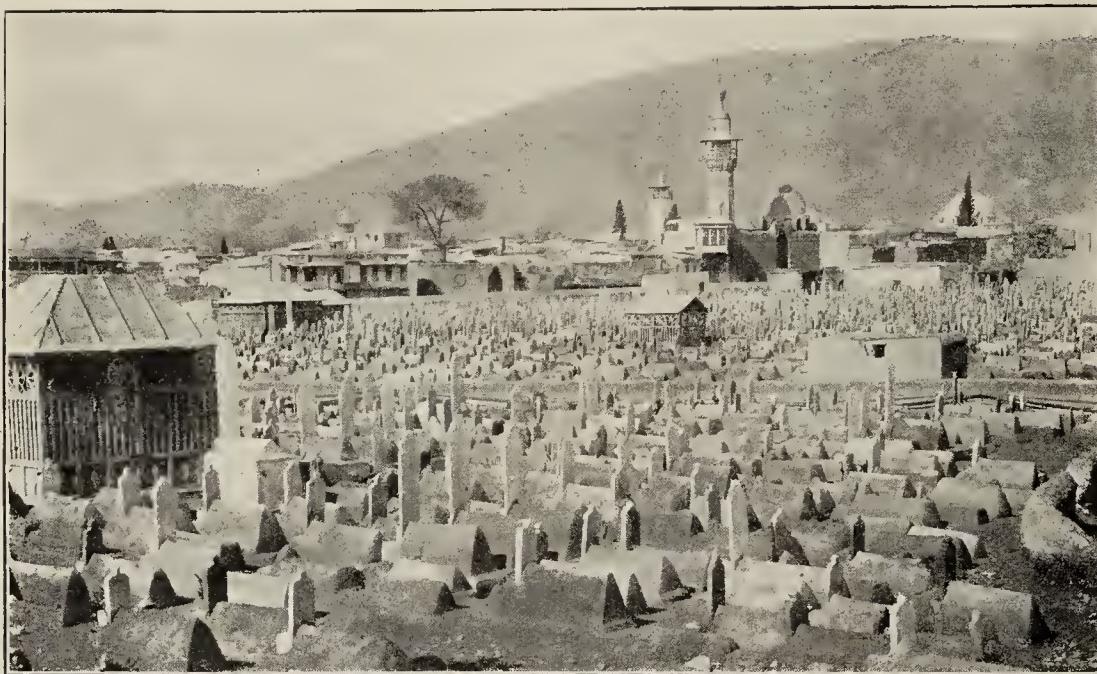


PLATE I. MOHAMMEDAN CEMETERY, DAMASCUS.



PLATE 2.

be, suggest the forerunners of those that it is the effort of the promoters of the modern cemetery to banish for ever.

Plate 2. is an example of a cemetery, carefully

kept but preserving many objectionable characteristics. The formality of the square sections, the monotony of outline so subversive of beautiful possibilities, the topiary efforts reducing to formal lines the

idea of bordering the sections with coping to mark their outlines.

Plate 4 presents a scene in a modern cemetery and who will deny its claim to outrank its predecessors. Harmony and repose are reflected from every point. Symmetry of nature's teaching proclaims itself, to rest the eye and refresh the mind. A work of art is spread out before one, nature's materials are the pigments, earth and sky the canvas, and the hand of man in touch with nature herself the composer. The modern cemetery must be as far as circumstances permit, a work of landscape art; the examples already established point such lessons while presenting such



PLATE 3.

wondrous grace of nature in her tree forms, the mounds, the tall markers—cold right angles everywhere and no curve to create diversion or stimulate the mind to a love of the beautiful.

These remarks hold good for a great number of cemeteries in our smaller places, and to not a few in the larger ones. The apparent care is a redeeming feature and intimates that progressive ideas are formulating.

Plate 3 is a familiar scene in many of our larger cemeteries; it may be added, however, that the picture shows the older portion of the grounds, already developed before the new era fairly set in. In particular it displays the crowded condition of its monuments, almost obliterating the face of nature; its high markers, posts and other stonework rendering the care of the grass difficult and expensive, and the old

attractiveness, that to work from them as examples becomes practically, a business obligation. There is no cemetery so small but it can be made a beauty spot, none so large but it presents a field for land-



PLATE 4.

scape effort that will reap a reward. The ultimate of the cemetery would appear to be in a sense, the memorial park, preserved for ever under the provisions which well regulated enterprises are working

to accomplish. A park where combined with beautiful landscape effects are the resting places and memorials of those "not dead, but sleeping," and where the very nature of the surroundings prescribe rest and peace and freedom from the "mad-ding crowd," for the recreation of which the public park is made also attractive elsewhere.

REFORM CLUB, NEW YORK CITY.

Among the important efforts of the day, projected to remove some of the evil features of our municipal government and to promote the cause of higher civilization, which, indeed embraces so much that we are far from having attained, is the Reform Club, New York City.

Organized last year on a scale demanding deliberate action, it was obliged to face the unsettling influences of the presidential campaign, and so was hampered more or less in getting solidly down to its proposed line of work.

A series of meetings was inaugurated in the spring of 1896, which have been continued at intervals since, at which important problems of municipal work were discussed by able exponents. But the first systematic work undertaken in New York was the getting together of a working library, and suggested by that work, a bibliography upon the subject of municipal affairs. This has just been issued as the first number of an intended quarterly publication entitled "Municipal Affairs." The title of the issue itself is "A Bibliography of Municipal Administration and City Conditions."

A remarkable fact in connection with it is, the surprising amount of literature that has been produced on municipal matters. The material has been gathered from all sources, and comprises between three and four thousand articles. The work is excellently well presented, with abundant cross references and forms the most complete index of the kind ever published. It may be taken for granted that co-operation was freely accorded wherever solicited, with results most gratifying, and which is courteously acknowledged.

With such a foundation the work of the Reform Club should be much simplified, and this means in due time wide spread activity, all things being favorable.

In closing a circular giving a summarized view of past and future work, the following appears: "In view, not merely of the special urgency of the situation created by the greater New York question, but of the extraordinary extent to which the interest of all classes has of late awakened to the problems of municipal administration, the committee proposes, as fast as the success of any step shall justify further advance, to undertake educational

work upon the subjects which come home most nearly to the citizens of our metropolis; and it invites the co-operation of every patriotic citizen in helping to make our city more rich, more beautiful, and most of all, a more healthful, comfortable and attractive abiding place for ourselves and our fellow citizens."

This involves sentiments appealing to all classes and all localities, and should inspire effort in similar directions wherever conditions invite attention, and just now where do they not?

The secretary, Mr. Robert C. Brooks may be addressed at 26 Delancey street, New York.

ALL SUMMER EFFECTS.

Summer decoration is a highly important part of Park work and it goes without saying that the more good all-summer effects are secured in planting the better.

That is to say—the more space planted in the spring, as soon as out-of-door work can safely be commenced, with a prospect of the material used soon presenting an attractive appearance that will continue until frost cuts it off, the greater the reduction in time and expense, both of which considerations must needs be active factors in deciding the summer campaign of Park and Cemetery superintendents, who must furnish something attractive for visitors to look at not semi-occasionally, but every day throughout the season.

Some of the best beds and groups that come under the head of "all-summer effects," are made up of plants whose flowers are of no consequence, foliage alone being taken into account in their use.

The three groups here illustrated were grown in locations naturally rather moist; Nos. 1 and 3 being in swampy soil near the water garden in Tower Grove Park, of which those of our readers who attended the St. Louis Convention probably have vivid recollections; and No. 2 in the Botanical Garden adjoining. All are exceptionally good examples of this useful style of decoration.

No. 1 represents an oval bed 30 ft. by 40 ft. in size. In the middle is a group of the great reed, *Arundo Donax*, surrounded by a row of *Glycerum argenteum* or true Pampas grass. 2nd. row: *Erianthus Ravennæ*, the plants being set in front of and between those in the first row, which plan is followed throughout the bed. 3rd row: Three varieties of *Eulalia* in alternation. Last row: *Pennisetum longistylum* and *Panicum plicatum vittatum* in alternation. The photograph was taken in the fall after the *Pennisetum* had been cut out and shows the *Panicum* drooping over and occupying the entire space given to the outer row.

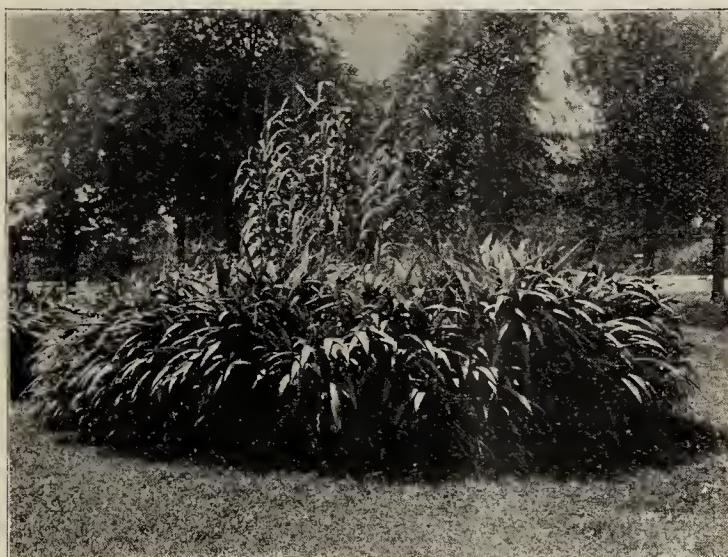
It is Mr. Gurney's custom to use these two grasses in this way, because in most years the Pen-

Nicetum becomes unattractive in this latitude during the latter part of summer and has to be cut out.

It is, however, so pretty while in good form, and so easily grown, either from dividing in spring clumps that have been wintered under a greenhouse bench, or from seed, that its use is highly recommended.

Another desirable all-summer combination seen here includes Cannas bordered with these two grasses, and at Lincoln Park Mr. Stromback often borders beds of Cannas with the *Pennisetum* alone, as he finds it retains its beautiful feathery heads in good condition to the close of the season in the more humid atmosphere of the Lake shore.

No. 2 shows that wonderfully effective and rapidly growing annual, the Zanzibar Castor Bean surrounded by *Alocasia esculenta*. This *Ricinus* of truly "Jack's-bean-stalk" proclivities is surely the



NO. 1. REEDS AND GRASSES.

most easily grown of all semi-tropical plants, attaining an immense size even in ordinarily good garden soil and with no water save the natural rain fall.

For two years in succession it has grown to a height of from twelve to fifteen feet in my garden (with no care except weeding,) with plenty of leaves measuring thirty-six inches across, while a few were larger and, of course, some smaller. And, while some of the seeds were started indoors in small pots, those that were sown outside in the spot where they were to remain have overtaken the transplanted, pot grown seedlings. But more seeds ripened last year on the latter, and at least one of the plants had a stouter stem and greater spread of branches. This specimen, however, grew in a spot where moisture is retained longer than elsewhere in the garden.

One year Mr. Gurney lifted a plant of this *Ricinus*, wintered it in the storage house, and the following season it was planted out again and became a great leaved tree sixteen feet high.

No. 3 shows a large circular bed of *Papyrus*



NO. 2. SEMI-TROPICAL EFFECTS.

antiquorum or Egyptian paper plant, bordered by *Cyperus alternifolius*, popularly known as umbrella grass, but which in this case had a size and luxuriance that gave it an unfamiliar but highly ornamental aspect. The contrast between the fleecy, wind-tossed heads of the classic *Papyrus* and the sharply rayed, wide spread "umbrellas" gave a distinct value to this combination that should commend it to every Park or Cemetery superintendent who has a suitable environment to offer it. Indeed all of the effects illustrated may well interest those



NO. 3. GRASSES.

who can furnish similar conditions, for they were even more satisfactory than any reproduction can suggest.

Fanny Copley Seavey.

OAK GROVE CEMETERY, DELAWARE, O.

The perfection to which the art of illustration is attaining, and the fact that, as many authorities aver, pictures talk louder than words, make dis-



ENTRANCE VIEW, LOOKING SOUTH.

criptions oftentimes superfluous in the matter of explaining the conditions or enlarging upon the appearance of the work, for instance, of the cemetery superintendent.

It would seem that these remarks may be fairly applied to Oak Grove Cemetery, Delaware, O., illustrated in the accompanying half tones. The pictures speak for themselves in no uncertain way, and give an excellent general idea of the lay-out of the cemetery, the care bestowed upon it, and the extent to which the latest ideas concerning cemetery management are recognized by the officials.

The history of Oak Grove is interesting. Delaware, O., which is noted for its Wesleyan Methodist College and its mineral springs, contains some 8,000 inhabitants. The cemetery was started in the year 1850 as an incorporated association, but the originators were ahead of the times, and getting into financial difficulties the cemetery, after a year or two, was turned over to the City Council, and was operated by that body until the year 1887. At this time some leading citizens investigated the laws bearing on the cemetery question and found that

the legal way to govern Oak Grove was by three trustees, elected by the people.

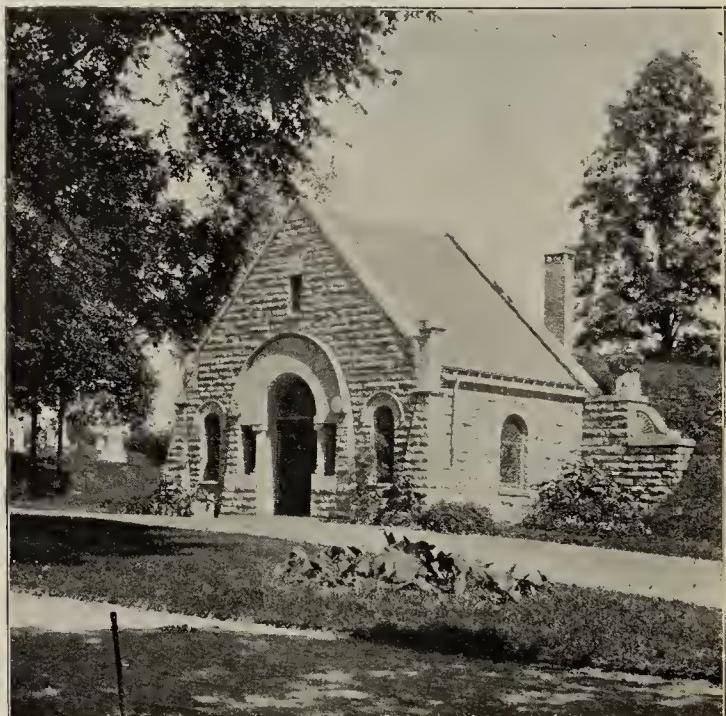
This was carried into effect and Mr. David Grinton, the present superintendent and secretary was appointed, and an era of active work set in to develop the property.

Mr. Grinton's own words in relation to the work are interesting, he says:

"Our principal aim, next to improving it was to perpetuate it, and if any one supposes it is an easy matter to adjust an old cemetery to modern ideas, wherein everybody interested did just as they willed for 36 years, he will find himself mistaken. However we went ahead with the improvements for two years, towards the end of which we found that our local press, irrespective of politics, had so commended our work, that public opinion had turned in our favor. However, the adoption of the plan was retarded until 1894, by the frequent changes of trustees."

"It is astonishing, how far reaching a cemetery is. When I sat down to my plat, examined each individual lot and set to work to correspond with its owner or his heirs, I found that nearly every state in the Union as well as Mexico, England and India, had some one who was interested and pleased to hear about the family lot in the little cemetery in Delaware.

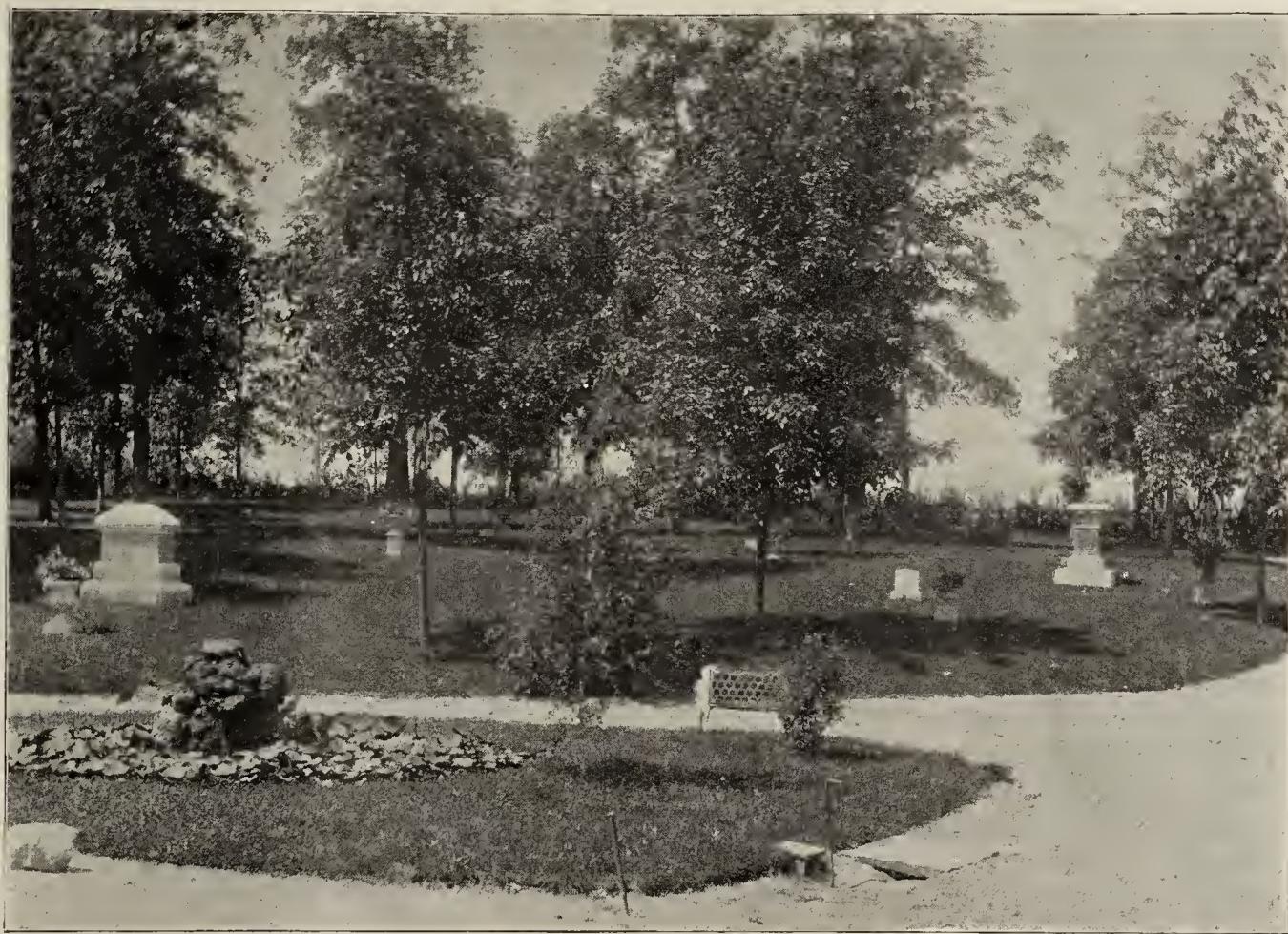
"In 1894 a resolution was passed by the Trus-



CHAPEL WITH RECEIVING TOMB IN REAR.

tees, that 20 per cent. be deducted from the purchase money of all lots sold and the amount placed in the perpetual care fund."

Appreciating the value of Perpetual Care for the



VIEW IN CEMETERY,-AQUATICS IN THE FOREGROUND.

preservation of the cemetery to after generations, an aggressive policy has been steadfastly maintained. The local press has been invoked, attention is called to it on all correspondence and business communications, continual reminders and arguments in printed form are pressed upon lot owners not yet so protected, and a constant effort is kept up to present the important question before lot owners as well as their friends.

The cemetery is also an object lesson in this direction. Lots under care bear a ticket which reads "under superintendents care." This is done for two reasons: one that the men will not miss any that are under perpetual or annual care, and to which special attention is given regularly every week, so that at all times they may be presentable to owners and visitors. All other lots are mowed with a scythe about three times during the season.

Even with ample funds it would be unwise, while the campaign for Perpetual Care is active, to undertake the full care of all lots, as will be readily understood. The success in the direction of the "Perpetual Care Fund" for Oak Grove cemetery is also in great measure due to the standing of the trustees in the community. The reputation of a cemetery's officials in the local business and social world, is a

power which cannot be overestimated; their assurance in business matters creates confidence, and their sympathy invites co-operation.

There will be observed in the illustrations evidences of the presence of aquatic plants. In the use of such material the superintendent has met with marked success, and his experience in this department of decorative work is promised for an early issue.

VILLAGE IMPROVEMENTS.

The evolution of civilization strides along at a rapid pace in a country like ours, enjoying the freedom which our form of government supplies, and furnished with the boundless resources of this great continent. Each successive stride, though many occur in a generation, seems to become an epoch, marked by distinctive advances in certain lines of development, until establishing a certain condition it may rest for a time to gather strength for another advance.

At this time there appears to be a rapidly growing attention to the external conditions surrounding us, looking to the betterment of villages and towns as regards adornment, sanitary conditions and the many improvements that can be made to

reate the "village beautiful," out of the disorder and unkemptness which, as a rule, has generally accompanied village conditions.

The idea of improving the village, either as a whole or in the matter of individual holdings for the general effect, has not been accepted as one carrying with it valuable possibilities. "Each for himself" has been too much the rule of life generally, individually and collectively, and little effort has been made to prove the force of "In Union is Strength," either as regards improvements for improvement's sake, or for the increased benefits which accrue to the community from organized effort in this direction.

Comparatively speaking, up to the present time on this line, the whole strength of the country has been exercised in the locating and building of towns and villages and not to improving or adorning them; and moreover, this created such a system of real estate development that a fashion seemed to be set controlled by the real estate genius.

Then, again, the American methods of surveying and mapping its territory, tending to obliterate all natural features in the practical building up of towns and villages, forced a monotony in plan to which attention is now being vigorously called by the growing profession of the landscape gardener.

Whatever the causes, our towns and villages for the most part have hitherto lamentably lacked in the line of attractiveness, and the determined activity to redeem some of the lost time in the matter of improvement is a very favorable sign of the times.

What shall constitute the principal features of village improvement and how to organize for the work have been the questions which have puzzled the activities of the average community, and deterred the most enthusiastic from active interest.

Perhaps before any decided steps are taken towards adornment the question of "cleanliness" should be considered. Clearing up the debris, keeping the streets free from rubbish and the alleys clear of the accumulations of household refuse that so frequently render such by-ways absolutely obnoxious for purposes of passage, and detrimental to the health of the community. If the village authorities are not disposed or constituted to do this work, and they certainly should be, organized effort on the part of the villagers might easily compel this, as it is a necessary function of village boards. Or working hand in hand with the village board a committee appointed by the citizens by mutual understanding could make this a special duty. The care of sewers, drains, ditches and other sanitary necessities could, if not cared for by the local authorities, come under the attention of this committee. Special attention should be given to the drains and

ditches that they be kept in the highest efficiency, so that besides the particular work for which they were laid out, they may be so arranged as to quickly drain the pools and stagnant waters after storms, as well as the village thoroughfares, that the roads may be kept in as good a state as possible. It is astonishing to note the difference between a village existing under careless conditions and one wherein the citizens exercise an active care. It affects not only the physical conditions of the real estate, but both the physical and moral conditions of the inhabitants. A civic pride is created, and what was once nobody's business becomes the particular business of each individual member of the community, who with watchful eye not only protects his own interests in the question, but with equal cheerfulness that of his neighbors.

The most serious drawback to the good appearance of our villages in certain seasons of the year is the condition of the roads, and until more serious appreciation of the advantages of good roads is entertained and more intelligence devoted to their care we may expect little change. The whole subject of roads and roadways is one of the most important to be grappled with; it entails considerations of the utmost import to the community, both economical and sanitary, and yet no great subject has been more neglected. Good roads require intelligence and money to construct them, it is true, but it is possible to greatly improve present conditions with some intelligence and a little money, and every community might be readily educated to the necessity, importance and value of such improvements, and work to the end that the local authorities be materially aided in prosecuting such work.

RURAL LANES OF ENGLAND.

We hear much and read much of the beauty of the rural roads of England, so beautiful do they seem to those of us who see them for the first time, or again after a lapse of years. These roads or lanes combine so much of the useful and beautiful, that it is no wonder they win the admiration of every one. In the first place, the road bed itself is generally a splendidly perfect affair, well macadamized and kept in such good repair that carriages roll over it with as little friction as would be met with on asphalt pavement. It has taken years to reach this almost perfect state, but as it is, it cannot be made much better, whether for riders or pedestrians, the way is always more than passable, it is inviting.

There the most of the roads are, like our own, in the country. They wind about prettily, without deviating so much from a straight line as to cause much loss of time between different points. Then

they are almost universally bordered with a hedge on both sides, and perhaps to this hedge more than all else besides, is due the quiet beauty of the scene. These hedges when artificially formed, are of the



SPENCER ROAD, ISLE OF WIGHT, ENGLAND,

common hawthorn, *Crataegus oxyacantha*, but very often they seem to be of spontaneous growth, as such things as maple, rose, honeysuckle, elm, dogwood and oak are in excess of anything else. But of whatever they are, their owners are particular to have them nicely trimmed. Sometimes an opening gate or a low hedge will permit of a view on the other side, and it may be a well tilled agricultural field, or some fine mansion embowered in trees that meets the eye. Sometimes large trees on each side spread their arms across, forming a living arch, and then indeed there is a lovely scene. Such a road is shown in the photograph of Spencer Road, represented here. This lovely secluded lane is between Ryde and Binstead, and on the way to the ruins of Quarr Abbey, Isle of Wight. It is not, I think, a strictly public road for vehicles, excepting to such as belong to those whose grounds abut on it, but pedestrians have free access to it and along it to its termination. There are seats, too, near the hedge for those to rest who wish to enjoy the scene, and for loving couples, and well they seemed patronized. The hedge is of hawthorn, well kept as may be seen. The splendid trees on each side are planted in grove style, not in straight lines. Probably some are original trees which were there in their wild state. The trunks of many of the trees are ivy clad, as may be seen by looking at the first tree on the right hand side, while between the large deciduous trees

are planted evergreens of the broad leaved type, our own lovely magnolia grandiflora appearing near some of the dwellings. Leaving the enticing spot with reluctance, which every one does, another quite different, but bright scene unfolds itself. On the right is another pretty lane, hedged nicely on both sides. Looking to the right are the blue waters of the Solent. A verdant meadow intervenes, while beyond the five or six miles of water, can be seen the "White Cliffs of Old England" on the mainland. I think Byron's lines will find a fitting place here:

"Yet are thy skies as blue,
Thy crags as wild,
Sweet are thy groves and
Verdant are thy fields."

for well it describes my thoughts when last viewing the enchanting spot. I was informed that an American family, the Winthrops, were living in this place. Not a great way from Spencer Road is the ruins of Quarr Abbey, once a famous Cistercian Abbey. It is an ancient affair, having been built in the year 1132, by Baldwin, Earl of Devon, and dedicated to the Virgin Mary. The whole of the buildings, as well as the stone wall which surrounded the 30 acres it enclosed, are now a mass of ruins, ivy



SEA VIEW, ISLE OF WIGHT, ENGLAND.

grown, and tumbling down. To those who see these and similar ruins every day no emotions are awakened but to those who like myself come from a land where ruins do not exist, it is next to impossible to

do aught but stand and gaze on these old piles while our thoughts run back to the long long ago.

On this the Isle of Wight, the timber growth is usually nearer the coast than elsewhere. In the centre of the Island are mountains, downs as they are called, and these are mostly bare of trees. Their formation is chalk, to a great extent, with a thin covering of loam on top. Through the trees, near the shore, are some shaded secluded lanes, which always afford an enjoyable walk. We present a view of one, leading to the sea, at the North Eastern end of the Island, at a place called Sea View. It shows how the trees flourish right down to the waters edge. This little lane has a somewhat abrupt turn near its end, bringing the visitor suddenly to the beautiful view of the sea presented, while not far away, a splendid sight of the shores of the mainland may be had from Sea View Point.

When traversing this Island and other parts of England in the summer of 1895, and seeing the vegetation in the greatest profusion and in the most vigorous health, right down to the waters edge, I could but wish I had with me some of those who often ask me what will grow near the sea. They would then fully believe what I often tell them, that there is no limit practically to the list. It is the strong ocean winds and not the sea air that has to be considered, as a visit to many a spot on our own sea coast will show.

Philadelphia.

Joseph Meehan.

THE COMMON, LEICESTER, MASS.

All over the country, not only in the older towns and villages of the east, but in those of more recent date of the west, there will be found vacant plots of land belonging to the town perhaps, but all more or less neglected, used possibly by the youth of the place for their sports, but not infrequently as the dumping ground for the town refuse. At any rate they are blots on the fair face of the locality, yet offering themselves to an enlightened public for improvement as soon as their suggestiveness can be understood, and always by the very neglect of the opportunity, condemning the community for its shortsightedness. It is just such places that may be made the jewels in the village setting, by the exercise of a little intelligence and the expenditure of a reasonable amount of energy and funds to effect the transformation.

The variety of treatment of such neglected spots, or even the improvement of such as may have received a little ordinary care, is, of course, practically as unlimited as nature's resources for beautifying them. They may be improved by simply

making lawns, relieving the same by clumps of shrubbery, laying out paths, placing a fountain, or where the area permits, carrying out landscape effects, which should always be done under proper advice as promising the best results, artistically and economically.

In view of the good that may be accomplished by an active campaign of regeneration of the neglected spots referred to, it is the intention to present from time to time examples of actual practice in this class of improvement, as well as suggestions for available reference when needed. All such examples may be drawn upon for suggestions and frequently for inspiration.

The accompanying is a plan showing the Common of Leicester, Mass., as improved after the designs of Mr. Charles N. Lowrie, of New York City.

The town is beautifully situated on high ground, near the city of Worcester, and is coming to be a place of high-class residences. Public spirited citizens desired to make the common its most prominent and attractive feature, and adopted plans for the purpose. Before work was begun the common was covered with rubbish, the soil exhausted and the fine trees taking care of themselves. The grass was worn and thin, and cut up by irregular paths worn into its substance by the crossing and recrossing of pedestrians in the absence of well-defined walks. It was a typical New England common in the neglected and forlorn condition often prevailing.

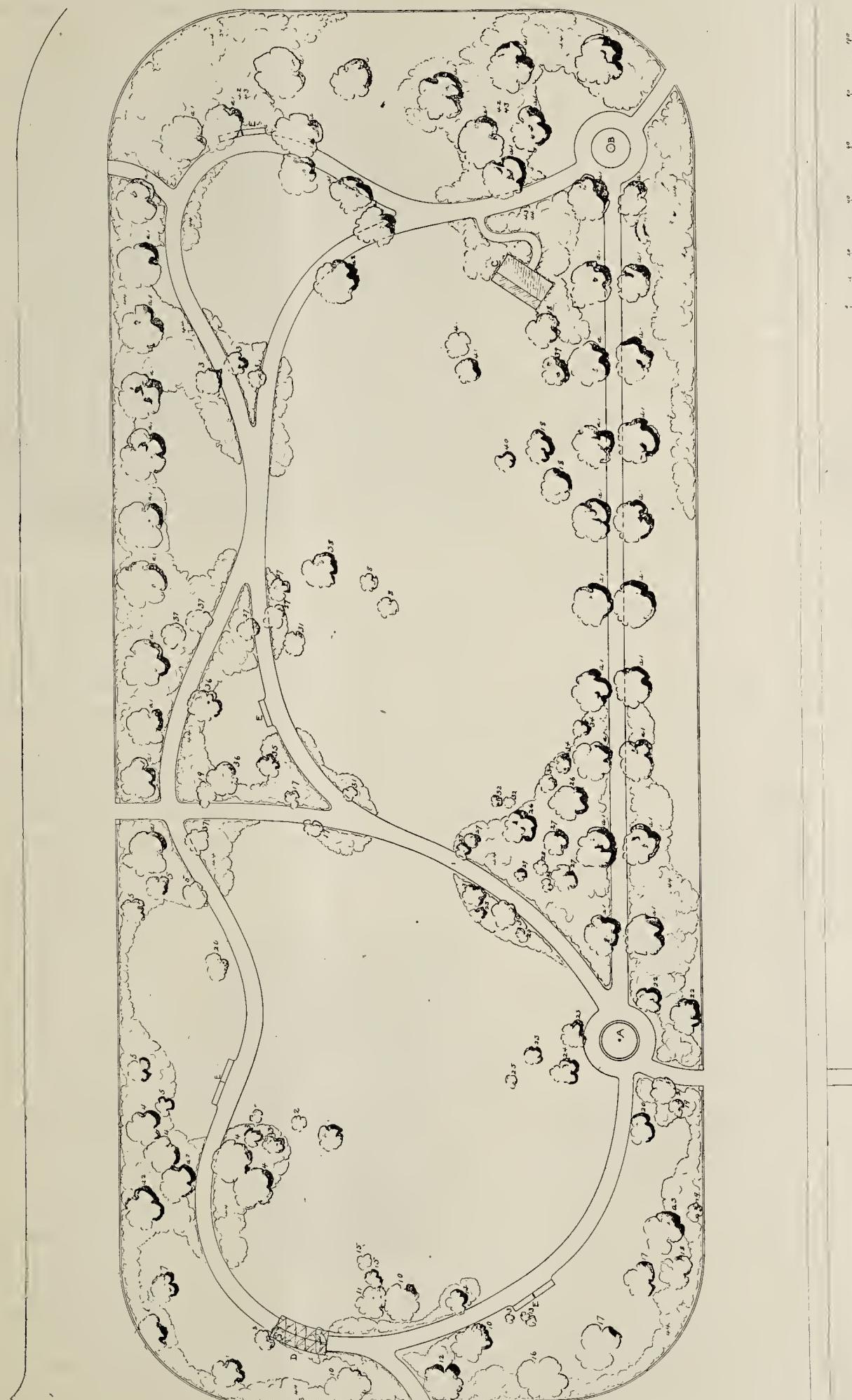
In explanation of the plan it may be said that the dominant motive was to retain its distinctive character as a New England common, to give an expression of dignity, breadth, intricacy and restful beauty, to the exclusion of trivial or flower garden effects. A gently rolling surface has a gradual slope towards the main street, and the desirability of direct communication between the hotel, store, town hall, academy, etc., which face the common on different sides, determined the location of the main paths, while a double row of old elms made a straight path between them a possible feature. An air of extent and breadth characterizes the design.

The planting plan, as regarding selection and disposition of material, is intended to give an interpretation in harmony with the traditions of the place, and create a unity between the scattered trees growing on the plot.

The arrangement of this small park gives an idea of what may be done in any town similarly situated. The immediate results of such improvements, have always justified the enterprise, and have realized the anticipations of the public-spirited promoters.

PARK AND CEMETERY.

15



THE COMMON, LEICESTER, MASS.

- | | | |
|------------------------------|------------------------------|----------------------------------|
| 13. Hamamelis Virginica, | 23. Magnolia Soulangiana, | 33. Cornus Alba Sanguinea, |
| 14. Crataegus Paulii. | 24. Magnolia Glauca, | 34. Aralia Spinosa, |
| 15. Crataegus Crus Galli, | 25. Exochorda Grandiflora, | 35. Salisburia Adiantifolia, |
| 16. Fagus Sylvatica, | 26. Fraxinus Americana, | 36. Acer Platanoides, |
| 17. Carpinus Americana, | 27. Crataegus Coccinea, | 37. Acer Pseudo-Platanus, |
| 18. Fagus Ferruginea, | 28. Lonicera Tartarica, | 38. Fagus Heterophylla, |
| 19. Chionanthus Virginicus, | 29. Lonicera Fragrantissima, | 39. Quercus Prinos, |
| 20. Acer Polymorphum, | 30. Circidiphyllum Jap. | 40. Quercus Phellos, |
| 21. Kolkheuteria Paniculata, | 31. Cercis Canadensis, | 41. Pyrus Aucuparia, |
| 22. Liquidambar Syraciflua, | 32. Ilex Verticillata, | 42. Kalmia Latifolia, |
| | | 43. Rhododendron Max. & Hybrids, |
| | | 44. Shrubbery. |
| OLD TREES. | | |
| A. 1. Ulmus Americana, | A. 3. Fraxinus Americana. | |
| A. 2. Acer Saccharinum, | | |
- REFERENCES.
A. Jet; B. Vase; C. Shelter; D. Arbor; E. Seats.
PLANTING LIST.
1. Cladrastis Tinctoria,
2. Sassafras Officinalis,
3. Acer Rubrum,
4. Acer Saccharinum,
5. Acer Pennsylvanicum,
6. Cornus Florida,
7. Cornus Florida Rubra,
8. Cornus Mas,
9. Pavonia Macro-stachya,
10. Quercus Palustris,
11. Quercus Coccinea,
12. Quercus Rubra,

GARDEN PLANTS, THEIR GEOGRAPHY, XVI.

ROSALES (A.)

THE GENISTA, ROSA AND DROSERA ALLIANCE.

(Continued)

Coronilla is a pretty genus of some 20 species of hardy perennial or shrubby plants with an occasional trailer. *C. varia* has naturalized in a few places in the Atlantic States; its juice is poisonous. *C. emerus* is hardy southwards, so also would probably be *C. juncea* and *C. emeroides*. *C. glauca* and its variegated form were once popular sweet scented evergreen tender shrubs, and others from the south of Europe should not be lost sight of where

ERYTHRINA CRISTA-GALLI.

pretty low evergreens are desirable. They would be especially useful for cemetery purposes in California.

Onobrychis, "saintfoin," has 70 or 80 species in Europe, Asia and Africa. They have mostly purple and reddish—sometimes yellow flowers, and are best treated as annuals from seed. A few such as *O. cornuta* are evergreen. The British *O. sativa* is not only handsome but an excellent fodder plant.

Desmodium has no fewer than 155 species from North and South America, and the warm parts of Asia, Australia and Africa. Thirty-two or three forms are native to the United States, quite a number of which are northern. The flowers are generally in some shade of purple, and sometimes rather handsome. They are known, as "tick trefoils." Of the Asiatic shrubby kinds *E. tiliaefolium* seems to be the only one in cultivation at Kew; it is Himalayan. *D. gyrans* is the curious East Indian "moving plant."

Lespedeza is in 35 species of herbs and shrubs from North America (half a dozen in the Atlantic States) and also from the temperate and tropical parts of Asia. *L. bicolor* and *L. Sieboldi* are in gardens, often sold as desmodiums. *L. Delavayi* and other Japanese ones are known, and the Himalayan *L. criscaspa* is evergreen. A few are annuals.

Lathyrus has 100 or more species, mostly in the northern hemisphere, and in South America. It is to this genus that many of the most popular flowering peas belong. *L. odoratus* is the sweet

pea; *L. latifolius* the everlasting pea; and there are many other very handsome climbers. Some are dwarf perennials or annuals, and *L. pubescens* from the Argentine Republic is said to be an evergreen shrub with blueish purple flowers. Many species vary prodigiously, but there does not appear to be many hybrids. A dozen or so of species are natives and the best are by no means to be despised. *L. pratensis* the English "meadow pea" is yellow flowered and naturalized at northern points. It is a good fodder probably, for cows eat it out whenever they can reach it, and will almost climb a thorn bush for it!

Centrosema, *Clitoria*, etc., are handsome climbers called often "Butterfly peas." They are natives of North America, Mexico and other parts of the world.

Erythrina has 45 species widely diffused over the tropical and warm regions of the world. One or two extend to southern parts of the United States. Several of the East Indian and South African kinds are naturally arborescent. *E. Crista-Galli* is one of these latter, but becomes semi-herbaceous in climates whose seasons are adverse to its endurance. If protected around the stool by pine needles or saw-dust there is no doubt but it would stand as far north as Richmond, Va.

Butea is a genus of East Indian trees in 2 or 3 species. I have mentioned but few tropical species, but cannot pass over these.

They have had no sufficient justice done them, nor have they been figured except I think by Major Beddome in his *Flora Sylvatica* of South India. To my mind *B. frondosa* is far and away ahead of the famed *Amherstia*. Fancy a tree whose contour is that of an apple tree and running in the same

sizes. In the dry season it loses its leaves — wholly or in part—sometime half the tree loses them and the other half retains them, when the bare half only flowers. But the whole tree commonly loses its leaves as is common and then about the new

year the bare branches are clothed with flowers in bunches of three or four like a *Cercis*, as large as *Erythrina Crista-Galli*—and more glowing than *Clianthes puniceus*. Not only are the twigs clothed



LATHYRUS LATIFOLIUS ALBUS.

thus, but the thick branches and sometimes the trunks are a flower. The *Buteas*, *superba* and *frondosa*, are princes of the Vegetable Kingdom! It is just a question if they would succeed on the south-



CLADRASTIS TINCTORIA. (From *Gardening*.)

ern-most boundaries of the United States? They are widely diffused in the two Indian peninsulas, and seed should be tried from the drier parts of the N. W. Provinces and from the Carnatic.

Peuraria has 10 species from tropical and Eastern Asia. They are a long remove in habit from the last genus, although they are in the same tribe with flowers built on the same plan. *P. Japonica* (sold as *dolichos*) is perhaps the most rapid growing climber known to northern gardens, sometimes growing from the rootstock 50 feet in a season. It is not very hardy, but grows from the roots as far north as Albany, N. Y.

Phascolus are the "runner beans," etc. The "scarlet runner" is sometimes grown as an ornamental plant, and many are esculents. There are 150 described species to say nothing of varieties. They are found in all warm regions having rainfall.

Vigna is a genus in close affinity and with a similar distribution. There are about 45 species, most of those in cultivation having yellow flowers. *V. luteola* in variety extends northward to the Gulf States.

Dolichos has perhaps 30 species in tropical and sub-tropical parts of Asia, Africa, Australia and America. *D. lignosus* is a favorite greenhouse creeper with gardeners, it will stand a degree or two of frost, and a sub-tropical climate; then it will mount to the tops of large trees, and festoon them like wild vines.

Virgilea is a monotypic genus from South Africa. *Cladrastis*, "yellow wood," has two species one *C. tinctoria* with drooping flowers is from the southern mountains and a beautiful tree and as hardy as a locust. The engraving whose reproduction has been kindly permitted by the *Gardening* company for these papers, shows both the northern shrubby and southern tree expression, the smaller one in flower. *C. Amurensis* is so far a smaller tree or shrub with stiffer panicles of flowers. The flowers of both are in the way of the white *Wistarias*.

Sophora has 30 species of varying habit, distributed over the warm regions of the world. *S. Japonica* in three or four varieties is occasionally seen in gardens. It is quite hardy to the lower lakes anyhow, and perhaps the pendulous form is the most striking tree we have, especially in the winter.

Camoensia is in two species from Angola and other parts of West Tropical Africa. *C. maxima* is regarded as the largest flower among legumes, the flowers being "nearly a foot in length." The plant is said to be a shrub, and therefore easily capable of cultivation in park conservatories in warm parts of this country. I am not aware if it has yet found its way here.

Cesalpinia is in 40 species distributed over all the tropical and warm regions of the world. Three species are natives or adventive at extreme southern points, *C. (poinciana) pulcherrima* being one of them. *C. regia* has attained to 20 or more feet high and flowered in South Florida before being frozen.

C. Japonica is hardy in England, and should be tried in the Carolinas.

Gymnocladus is a monotypic tree known as "Kentucky Coffee." It is a striking object when young but requires room to properly develop and be seen.



BAUHINIA PURPUREA IN S. FLORIDA.

Gleditschia, or "honey locusts," have 4 or 5 species from North America, Asia, and the African mountains. Botanists contend I believe that these trees and the common locust are adventive in the middle states. If this be true New

England is as bare of leguminous trees as Britain, but certainly seeds reproduce trees in the middle Delaware Valley.

Cassia is an extensive genus of nearly 400 species (or names?) Here we often have the rose shaped



CASSIA CHAMAECRISTA.

flower, and the leguminous fruit. They are found in all warm regions and are often handsome.

Cercis, "red buds," have 3 or 4 species in Europe, Asia and America. *C. siliquastrum* is the European "Judas tree" and is very common in the gardens of Eastern Europe. It has a

white variety. It is tender in the states north of Virginia. *C. Sinensis* (known as *japonica*) is tender too if taken too far north. In New Jersey I have measured specimens of 21 feet spread, and 15 feet high. The native *C. Canadensis* is a handsome hardy small tree.

Acacia has 500 species from the warm regions of all the continents but Europe. They are well known, handsome tender trees and shrubs, useful only in the southern and Pacific parts of the United States, and in greenhouses.

Albizia Julibrissin (called acacia) has often stood for several winters at Trenton, N. J., and is naturalized along the Mexican border. Several other species are grown at the south.

The greatest difficulty in dealing with these plants is to confine a representative collection within reasonable limits.

There are scores of genera with hundreds of species which are adapted to the warmer parts of this country, or to massing as groups in the "sub-tropical" gardens at the north, such as *Clitoreia*, *Hovea*, *Mucuna*, and *Inga*. As a family the finer legumes have been neglected for purposes of ornament in American Gardens.

Trenton, N. J. James MacPherson.

Note:—In the last issue, the genus *Amoapha* was incorrectly attributed, by oversight in proof reading, to North Carolina instead of North America.

LE NOTRE, THE GARDENER.

A historical essay read before the Horticulturists' Lazy Club of Cornell University, January 11, 1897.

The gardens of Louis XIV. of France were perhaps as brilliant as any creation or adaptation of that brilliant king. Combined with the architecture of the time they were the setting of that magnificent court, whose

fame shone and was reflected over all Europe. The wonder of their day, they are still admired as the highest creations of that former style of gardening which lasted from the earliest times until the last century.

The ancient, formal or architectural style of gardening of which the gardens of Louis XIV. were a type differs from the present in that it was purely architectural, and not based upon nature as the modern or natural style is. Art and nature are present in both, but in the former style art was the thing most thought of, while in the latter it was studiously concealed. The straight line, rectangular form and general symmetry were its prominent features. Everything was considered as a part of the building which it surrounded. Terraces, arcades, straight avenues of trees interspersed with statuary, parterres, canals and trees and shrubs clipped into fantastic shapes and geometrical figures are characteristic of this kind of gardening. Fountains and cascades, grottoes, colonnades, labyrinths and arbors are other features of it. Nature is nothing, and the feeling of nature is unknown. The same materials were used that the landscape gardener of to-day would employ, but with a different thought and purpose.

The term garden as used until the eighteenth century was applied only to a yard or inclosed space surrounded by walls, as opposed to unenclosed fields and woods. Gardens on a large scale have existed from the establishment of the great regal powers. The monarchs of Nineveh, Babylon and all Asia each had their own. The formal garden of Western Europe, so far as is known, began with Persia. The straight line and rectangular form were its principal elements. The prevailing plan was one of long parallel walks shaded by rows of trees, and of canals flowing down avenues in straight lines and terminating in square or octagonal marble basins containing fountains. An interrelation existed between house and garden, the latter being used to frame the architectural features. A balance was maintained, even the great palaces being juxta-placed. The Greeks copied the gardening of the Persians, like their manners and architecture, so far as the climate and state of society would allow, while the Romans in turn imitated that of the Greeks, but on a larger scale. Pliny the Younger has left us an exact description of gardens of his time. Avenues were adorned with statues, colonnades, obelisks, triumphal arches, marble basins and precious vases. Between were lakes of living water, caverns and grottoes, streams and thick woods, all of them of beauty in detail, but without unity of composition. Buildings became united with the gardens by stairs, terraces and balustrades. Verdure, near the buildings, was not natural, but in straight lines to blend with the architectural features. Trees and shrubs were trimmed into geometrical figures, cylinders, spheres and pyramids into silhouettes of animals and human figures, and even into orders of architecture. During the Middle Ages and the Barbaric invasions gardening was barely kept alive within the protecting walls of the monasteries. But with the revival of the arts in Italy came the Renaissance of gardening, an almost exact reproduction of the old Roman style. The Italians were

fond of summer palaces surrounded by gardens, and their clear sky and bright sunlight caused them to develope a type suited to their climate. Their gardens were rectangular as before, and their lines suited to frame the architecture. Terraces, circular stairs and all their Roman inheritance were developed to the utmost. Parterres, that is, portions of the garden forming a complete plan in itself were a feature of the style; labyrinths brought to them through the Middle Ages from the Persians were in great favor, while costly exotics made the Italian garden famous throughout Europe. Such was the development of gardening when Louis XIV. began his career, and such were the materials which Le Notre, the creator of the French style of gardening, made use of in masterpieces of garden art.

Andre Le Notre was born at Paris in 1613, passing the prime of his life in the earlier and more brilliant part of the reign of Louis XIV. Though of peasant origin, he began existence under more favorable conditions than most of his class. His father was *intendant* of the gardens of the Tuilleries, and was ambitious for his son in the arts. Le Notre studied painting under Vonet with Le Brun with such success as to bid fair to distinguish himself in that branch of art. His aptitude for architecture, his fertile imagination and his love for decorative art in the garden led him into gardening, where he showed such ability that he was made his father's successor. Fouquet chose him to design his park and gardens of Vaux. The work was so admirably done that Louis XIV. was astonished and at once made him Director of the Royal Gardens. It was he who laid out Versailles, now considered his masterpiece, and this was followed by the gardens of St. Cloud, I'ceaux, Tuilleries, Fontainebleau, St. Germain and others. His fame went abroad. Either he or his followers laid out St. James and Greenwich in England, while Germany and Italy came to him for advice. It is not probab'e that he himself visited England, as there is no distinct record of the fact. Indeed, Switzer, who was one of the last, if not the last, exponents of formal gardening, did not even know who it was that laid out Versailles. Le Notre's peculiarities of character and intimacy with the king are illustrated by several anecdotes of him. While plotting out the gardens of Versailles he one day submitted to the king the principal features of his plan. As he explained each portion, Louis would interrupt him by saying: "Le Notre, I give you twenty thousand livres." At the fourth interruption Le Notre stopped him by this exclamation: "Your Majesty shall know nothing more about it. I should ruin it." Indeed, one feature brought about by Le Notre's genius, and which Louis could well admire, was his happy thought in turning the drainage waters of the marsh where Versailles was to be situated, since they could not be easily carried away into the canal which terminates the park. Le Notre was anxious to become acquainted with the gardens of Italy, and obtained permission to visit that country in 1678. Upon his arrival at Rome he was received in a distinguished manner by the Pope, Innocent XI., to whom he showed the plans of Versailles. At the end of one audience he said to the Pope: "I have nothing more to wish for. I

have seen the two greatest men in the world—your Holiness and the King, my master." "There is a great difference," replied Innocent. "The King is a great and victorious prince, and I am only a poor priest, servant of the servants of God." Le Notre was delighted with this reply, and slapping the Pope familiarly on the shoulder, responded: "Reverend father, you seem very well indeed. You will bury the whole sacred college." Innocent XI. could not keep from laughing, and Le Notre, more and more delighted, threw himself on the Pope's neck and kissed him. On his return to his apartments he wrote the affair to Bontemps, first *valet de chambre*, who had the letter read at a small reception of the king. The Duke de Crequi did not believe the details of the incident and wagered that the enthusiasm of Le Notre did not go so far as to kiss the Pope. "Do not wager," replied Louis. "When I return from a journey Le Notre kisses me. He may well kiss the Pope." After Le Notre had reached the age of eighty years he asked from the king permission to retire from his service. Louis consented on condition that he should come and see him occasionally. On one of his last visits, in the garden of Marly, Louis took him into his carriage with him. Le Notre was moved to tears. "My good father," he cried, "would open his great eyes if he saw me in a seat beside the greatest king in the world. One must say that your Majesty treats his mason and gardener well." Louis had earlier given Le Notre letters of nobility and the order of St. Michael, and in 1675 he wished to present him with a coat of arms. With all modesty Le Notre replied that he had his own—three snails crowned with a cabbage head. "Sire," he added, "can I forget the spade which is so dear to me. Do I not owe to it the bounties with which your Majesty has honored me?" Besides being a recipient of these honors Le Notre was a member of the National Academy of Architecture and one of the greater officers of the State. He died in 1700, and was buried in the Church of Saint Roch in a chapel which he had caused to be erected. Personally he was a man of large intelligence, scholarly execution, exquisite artistic taste, familiar with the arts in general and not unacquainted with the sciences. He is said to have been one of the original figures at court, a peasant with large shoulders, terrible face and rough carriage, joking and elbowing the courtiers with whom he mingled.

Le Notre's contribution to gardening is found in two qualities, feeling and grandeur. He united all his work into one great composition. He was the first designer to consider the work as a whole, and to look upon each of the innumerable details as a part of one great plan. He made verdure mingle with architectural forms to accentuate the outline. He placed statues to adorn the avenues and to determine their direction or serve as the end of walks. He introduced green sward, classified and gave harmony to pastures and blended the movement of fountains and noise of cascades. He abolished masonry walls and substituted earthen ones enforced by a moat in their place. He was the first to look for landscape effect and commingled in some degree nature and design. At the same time all was on an immense scale,

like everything else within the influence of Louis XIV. Switzer refers to these gardens as works so stupendously great as became the pocket and ambition of one of the greatest and most aspiring geniuses of the world. It was Le Notre who understood the value of a limitless perspective. He prolonged the vista through great avenues of trees, accompanied by lines of statues, in all directions from a great central space, or upon immense sheets of water, to destroy itself at the distance. It is true that there is a certain monotony in his works due to formality and balance, but it seems to largely come from the character of the style rather than the designer. In fact, it was his masterhand that unified these monotonous details and overcame this blemish so far as it was possible.

The French garden, as transformed by Le Notre and his disciples, is the Italian garden adapted to a flatter and more expanded country and made to express the grandiose ideas of Louis XIV. While nature was beginning to be thought of in some degree the more conscious thought was to prefer art to nature, and to make a suitable background for beautiful costumes and fine forms. In fact, the picture of gardens of this character remind one wonderfully of the gaudiness and hollowness of stage scenery. The French garden of Le Notre differs from its predecessors in the following respects: That it had a purpose, a development upon an aesthetic basis for itself; that it was of large size, two hundred acres at least, large in contrast with Bacon's ideal garden of thirty acres; and, that it introduced a magnificent perspective. The construction was still symmetrical, complicated pastures and geometrical flower plots were placed at balance, canals followed straight lines, trees were clipped and at rectangular intervals arches, columns, balustrades and statues gave richness to the design, but through all this was a magnificent taste, which bound together these endless details and gave to order harmony. It is not strange that this type of gardening, the best then known, should spread at once through civilized Europe, and the influence of Le Notre's gardens amount almost to tyranny. In fact, such was the effect that it was not long before every garden in France was required to be laid out according to fixed rules, so much as to be a matter of ridicule. In England, from whence our gardening is derived, this style prevailed for half a century to be supplanted by another modification of the Italian garden, brought over with William III., the Dutch style. This is the one, closely resembling the French, at which Pope flung his sarcasm:

"Grove nods at grove, each alley has a brother,
And half the platform just reflects the other."

This in turn gave way to the natural or landscape style of to-day.

In a study of this kind it is interesting to look into the reasons for certain developments. The gardens of the east were used for indolent recreations as places to secure coolness and pleasure. The square form was the simplest, rows of trees allowed a continuity of shade, open plots gave air and artificial objects added variety. Transported to Italy, the garden was enlarged for the sake of allowing exercise and giving greater splendor.

Something was wanted different from the country outside, which could readily be seen from the mounds of earth and towers built within or at the boundaries of the garden for that purpose. Of its kind there was beauty enough without. They wanted something that told of man. They were not interested in nature for its own sake, but in mankind. They wanted a theater of human drama, and were not satisfied with less than seeing the human element in everything. France and England copied the gardens of Italy because they were agreeable and suited to offset the wildness of the outside world, as it then was. Art and nature were both indeed present, but art was everywhere avowed. At a later day, when these countries had become great gardens in themselves, the natural style came in to satisfy the love of nature in the midst of artificiality. Again, the separation of details and the dislike of obscurity as shown in uniform rows of clipped trees and other features may be accounted for, according to Olmsted, by the fact that "to the minds of our savage ancestors any confused or undefined scene was suggestive of hidden dangers, and hence unfavorable to a tranquil state of mind. This mental attitude decreased with the increase of civilization, but even toward the Middle Ages men looked with aversion upon all intricate and obscure scenery. Especially did they want everything seen from their dwellings to appear clearly defined." Lastly, a reason for the development of the French garden may be seen in the love of great monarchs for splendor, and in the tendency of the people to copy everything the monarch does. Louis XIV. used the garden as he did the *salon*, as a setting for his court, while the needs of his people were not in his thoughts. As his court was the envy and model of that of every petty prince in Europe his gardens were imitated also with all the arrangements for the same selfish drama of human action. This being the tendency of the age, it is evident that the genius of Le Notre appeared at the right time. With his systematic mind, his love for the grandiose and his taste for the elegant he gave to Europe an art developed in accordance with its own political aims.

Ithaca, N. Y.

A. Phelps Wyman.

THE TERM LANDSCAPE GARDENER.

In line with these remarks it may be well to consider the term landscape architect, which is now pretty generally used in place of the older and truer term, landscape gardener. The title landscape gardener arose over a century ago to designate the new art which aimed to give landscape-like effects to gardens. The term explains the art precisely. It signifies the enlargement of mere gardening into complete harmony and sympathy with nature, whereby a handcraft becomes a fine art. Before the introduction of the landscape-like garden gardens were formal or geometrical in their dominant features, and were for the most part but the extension of the ideas of building. In other words, they were architectural, and the revolution to more artistic

treatment is recorded in the very term landscape gardening. In recent times there has been a conspicuous reaction from the extreme naturalistic treatment of garden areas toward some of the formalisms of earlier methods, but the controlling sentiment is still free and artistic in expression, and no designer of the present day would consent to be bound by the hard and fast rules of former times. The terms landscape architecture and landscape architect are, therefore, anachronisms. But the worse feature of these words is the impression which they unavoidably impart, that landscape gardening is a mere formal art and is successful in proportion, as it follows certain conventionalisms. The chief reason why this term is becoming popular seems to be a desire for a more pretentious and high-sounding name, which shall place the garden designer upon an equal footing with his compeer, the architect.

One is tempted to explain this desire for a pedantic name to lack of power upon the part of the designer, for a true artist does not need to apologize for his title. But for the most part the term landscape architect has had a natural growth. Architecture has enjoyed a wonderful increase in popularity in recent years as applied to home buildings of the middle class, and gardening has not kept pace with it. A similarity of terms gives a seemingly equality of importance to the two arts, which is satisfactory to those who do not consider that landscape gardening is always of slower growth than the other. Another important influence is the tendency to lay out grounds by mere plans or maps without any adequate study of the lands themselves, or even without any personal knowledge of them. This comes largely from the great extent of our new country and the comparatively few landscape gardeners, and the great expense of time and money which is consequently demanded in a personal visit of the designer to the grounds. These ready-made plans have an educational value as suggestions, but if taken literally—as they too frequently are—they may work harm. It is the application of these general or outline plans to particular grounds which requires the skill of the trained landscape gardener, and the ready-made plans are, therefore, likely to fail at the vital point. But such plans enforce a likeness of landscape gardening to architecture, and account, in some measure, for the unfortunate terminology of which we complain.—L. H. Bailey in *American Gardening*, June, 1893.

The largest flower in the world grows in Sumatra. It is called the Rafflesia Arnoldi, and some of the specimens are thirty-nine inches in diameter. The central cup will hold six quarts of water.

PARK NOTES.

The plans for the harbor park, Newport, R. I., prepared by Messrs. Olmsted, Olmsted & Eliot, were adopted by the Park Commission.

Scranton, Pa., is moving actively in the direction of a more adequate park system, and some \$200,000 is under consideration for expenditure in this direction.

A proposition is being discussed in Yonkers, N. Y., to create a park commission and issue bonds for \$40,000 for the purchase of park land and its improvement.

The Park Commissioners of Buffalo, N. Y., ask for \$600,000 for park improvements and favor issuing long term bonds for \$475,000 to meet part of the expenditures.

A bill authorizing the expenditure of \$25,000 for the improvement of the Ninth and Fifteen street entrances of Prospect Park, Brooklyn, has been favorably reported in the Assembly.

New Castle, Pa., has been offered 60 acres of lands for park purposes by some well-known citizens, on condition that the city within the next five years expends \$10,000 in improving the tract.

Permission has been accorded Alexander Hamilton Post, G. A. R., New York City, to plant thirteen trees in some park north of the Harlem. The trees are designed to serve as successors to the thirteen planted by Hamilton which have been overtaken by the march of modern improvement. Commissioner Stiles remarked when the resolution was passed: "If Hamilton had known as much about planting trees as he did about making constitutions those trees would have lasted better. One tree would have had more leaves on it than the whole thirteen have."

Large sums of money are being called for this year to prosecute the work on the park systems in and about Boston. An appropriation of \$500,000 is asked from the Assembly for the purchase of land for the extension of the Charles River park system to Dedham. Another bill is to authorize the Metropolitan Park Commission to take land for a boulevard or parkway, from Squantum Head in Quincy to Boston and the Blue Hills reservation. Another general bill asks for \$1,000,000 for the construction of roads and boulevards by the Metropolitan Park Commissioners.

The Indianapolis City Council, at a special session, approved the plan for a \$5,000,000 system of parks, extending twenty-five miles, and designed ultimately to entirely circumscribe the city. The initial appropriation decided on, is for \$350,000, to purchase that part of the ground lying west and north of the city, along White River and Fall Creek. The Fall Creek section runs through the heart of the beautiful and elevated residence portion on the north side. The system is to include boulevards and parks, with a bicycle path, to connect with the present improved bicycle path leading to Broad Ripple, along the towpath, and which is acknowledged to be the most picturesque ride in the country.

Halifax, Nova Scotia, has in its Point Pleasant Park, one of the oldest parks in Canada, and for natural beauty scarcely to be surpassed. It comprises some 180 acres of land, situated at the south end of the peninsula upon which Halifax stands and its highest point is about 150 feet above the sea. There are some

eight miles of roads through it, and numerous footpaths, but it is practically all forest. In reality it belongs to the British government, but the city has the free use of it under a perpetual lease, conditionally upon no buildings being erected upon it, and no wharves or traffic allowed on its shores. There are some forts under control of the government. The city appropriates £2,500 a year for its maintenance, and much pride is taken in it by the commissioners in charge.

* * *

The year is opening up in great activity with the Park Commissioners of Rochester, N. Y. They recently voted in favor of an amendment to the park commission law by which they may be empowered to "purchase, clear up and beautify small plots of waste ground about the city," such as the little triangles at the angling intersections of streets and other such places. Another amendment is to empower the commission to plant trees along the thoroughfares of the city and assess costs against property of individuals benefited. This amendment is a questionable one, as all efforts to forcibly implant ideas of taste and beauty on a community must be. The idea of a park commission having enlarged powers to plant the streets with trees is a good one, but it should be done as a part of the park commission duties and the funds secured as part of the park plan. It is hardly probable that any large expenditures for any new schemes will be tolerated, opposition being very marked.

* * *

A new method of tree culture appears about to be tried on the Harlem River Speedway, New York City, according to a criticism in the *Scientific American*. In the original contract for this work, no provision seems to have been made for the planting of trees and shrubbery, and to remedy this it was determined to provide planting spaces ten feet wide on each side of the roadway. The constructed roadway not including material adopted for the work it was decided to lay trenches and fill them with suitable soil. These trenches, built of concrete and masonry, are practically water tight and extend in an unbroken line a great distance, and it is difficult to understand how such an expensive oversight could have occurred. Evidently the engineer who devised the plan does not include a knowledge of landscape work in his category, and certainly it would look a though the commissioners who allowed the work to proceed had overlooked this method of construction. To grow trees and shrubbery in a water tight trench has never succeeded. Such a mistake is harmful to a good cause.

* * *

The Brooklyn *Eagle* after condemning the bas-reliefs of Lincoln and Grant on the Memorial Arch, Prospect Park, and discussing improvements and excessive cost of some of them, touches a correct chord, in the following regarding the proposed statue of Washington. It says: "With all respect to the Father of His Country, we insist that he has statues enough in the greater New York, for he has three. Nor do we want any more statuary, either of Washington or of any manner of man, unless it is good statuary and the bill now before the legislature does not specify that this shall be a good statue. It cannot and will not be if the making and placing are put in the hands of men unacquainted with art and if some hack sculptor is set to work on it. We do not want any more Seward and Garibaldis and Bolivars and Cogswells and Conklings. If the work can only be staved off until the art commission that has been included as one of the certainties under the new charter has a chance to act, we shall be saved, even though we may have to pay the bill for another ridiculous effigy. We are an unconscionable while getting down to business in this country and in realizing that public work, like private work, is best done by intelligent and qualified persons."

CEMETERY NOTES.



A new main entrance is to be erected at Calvary cemetery, Milwaukee, Wis., the stone foundations for which are laid. The structure will consist of a main arch spanning the roadway, an ornamented and turreted base to the left and sexton's residence and office to the right. The latter portion of the structure will be two stories in height, the main portion, modeled somewhat on the plan of a castle, with a tower rising from the corner.

* * *

A Celtic cross will mark the grave of Harriet Beecher Stowe in the burial grounds of the Theological Seminary at Andover, Mass. This style of memorial has been selected by the daughters and son of the deceased. The cross will be of red Scotch granite upon a base of Quincy, Mass., granite, and will stand twelve feet high. It occupies one of the loveliest sites on the ground and it will be visible from some of most beautiful landscape scenery about Andover.

* * *

During February the largest number of interments for any corresponding period within the history of St. Agnes cemetery, Albany, N. Y., was made, as will be observed from the following figures taken from the records of the past twelve years: 1886, 26; 1887, 14; 1888, 31; 1889, 29; 1890, 36; 1891, 31; 1892, 37; 1893, 31; 1894, 48; 1895, 50; 1896, 63; 1897, 85. The total number of interments made in the cemetery up to the present time is 12,442. The thirtieth anniversary of the consecration of the grounds will occur upon the 19th of May next.

* * *

The annual report of Harmony Grove cemetery, Salem, Mass., shows that during the last year there were 175 burials and two removals. Mr. George M. Creesy, who was re-elected superintendent, is also president of the American Association of Cemetery Superintendents. One hedge and nine iron fences were removed. Considerable improvement was carried out, and many new sections laid out and a large greenhouse rebuilt. The sale of lots was larger than since 1892. Twenty-two lots were endowed and the trustees are urging the lot owners to work towards perpetual care.

* * *

The City Fathers of New Bedford, Mass., who have under their care Oak Grove, Pine Grove and Rural cemeteries, have recently awarded the contract for furnishing and planting the flowering and foliage plants in the flower beds of these cemeteries. The number of plants called for was 6,500 which included coleus, geraniums, cannas, helianthus, salvias, echeverias, Ricinus, achyranthus and other kinds, and the contract price is \$167. Last year the work, with less plants called for, was let for \$250. The highest bid was \$340, and it may be inferred from these prices that an unwholesome competition exists, from which it is to be hoped the cemetery will not suffer.

* * *

The ladies' of Waco, Texas, are a power in cemetery matters, and have induced sundry public bodies to back them up in their efforts to improve Oakwood Cemetery. Mr. Sam Taylor, landscape gardener of the cotton palace exposition, has prepared a plan which has been adopted, and which includes the transforming of a certain piece of ground near the centre of the cemetery into a small park, in which a fountain will be set and other features of park like adornment introduced. The zeal of the ladies' has been infectious and the lot owners have aroused themselves to join in the good work. A contract for trees has been let and improvements will soon be realized.

* * *

At the annual meeting of the lot owners of Riverside ceme-

tery, Rochester, N. Y., the trustees submitted a lengthy report accompanied by a map of the 100 acres now comprising the cemetery, pointing out the natural beauties of the property, the great improvements made, and enlarging upon the advantages of perpetual care, and the permanent quality which should characterize improvements. The total expenditure on the cemetery to date amounts to \$165,927.81. Three thousand lots have been laid out and the contracts call for perpetual care free of further cost. It is conducted strictly on the lawn plan, and individual headstones have to be set flush with the lawn.

* * *

The idea of adopting means to prevent burial in cases of mistaken death is once more under discussion. Among suggestions on the subject is that of setting apart or erecting a morgue in every cemetery, provided with electric or other means of communication between a supposed corpse and the office. As has been before noted in these columns, many of the European cemeteries are thus furnished, and a means of appeasing such dreadful doubts put in operation. Where there is the slightest doubt, any arrangement by which a body could be kept, without danger of evil consequences to attendants and others, until certain signs of mortification set in, would meet the case.

* * *

Many examples of the mismanagement of cemetery affairs by town authorities, who have gone into the cemetery business, are well-known. The town of Everett, Mass., is another if the strictures of the *Herald* of that town in regard to Glenwood cemetery are founded in fact. It states that in 1890 authority was had to purchase 12 acres of land at \$500 per acre. A total amount of \$34,800 has been expended on the cemetery with receipts of \$21,997, out of which \$150 has been reserved for a perpetual care fund. A recent order has been passed by the council appropriating \$9,000 for the purchase of additional land. In arguing the original proposition the mayor is said to have presented the case as buying land for a little over a cent a foot and selling it for sixteen cents. The paper suggests the reverse seems to have been the result.

* * *

Our contemporary *Sunnyside* says: Mr. Chauncey Depew caught a severe cold while attending the funeral of President Roberts, of the Pennsylvania Railroad, and he is now quoted as in favor of abolishing formal funerals which are especially dangerous for pall-bearers. He says that General Sherman prophesied that the soldiers of the late war would die off from the effect of exposure at the funerals of departed comrades. The general contracted the cold that resulted in his death by attending a Grand Army funeral. The custom of uncovering the head at the grave is responsible for many colds that have resulted fatally, and this feature of funerals may well be abandoned. People go to cemeteries in all kinds of weather, and stand for some time in the open air, while the last rites are being paid to deceased persons, when every mark of respect might just as well be paid within doors and with safety to the living.

* * *

Among the suggestions on "Funeral Reform" offered in a paper by the Rev. John C. Tebbetts, North Adams, Mass., are, in part the following: 1. Make the interval between death and burial short. 2. If a casket is to be used let it be a plain one, such as will be readily decomposed, and with little or no ornamentation. 3. The employment of a hearse might in many cases be dispensed with. 4. In the use of carriages economy is especially demanded. 5. All the "trappings and suits of woe" might wisely be abolished. 6. Flowers white and fragrant are appropriate as emblems of hope and the resurrection, but a few are sufficient if we can afford them. 7. Costly monuments, erected at private expense, and for the undistinguished dead, are a foolish waste of money. In conclusion the reverend doctor

says: If we believe in the resurrection we ought not to be drearily mournful over a death.

* * *

Waldheim Cemetery, situated in Oak Park just beyond the northwestern limits of Chicago, is a noted German cemetery, comprising some 81½ acres of land, bounded on one side by the Des Plaines River, from which the water supply is pumped direct. It was opened on May 1st, 1873, and owing to there being no religious restrictions it has been largely patronized by secret societies. The older portions of the grounds still display the characteristic profusion of stone work, but the newer parts are all conducted on the lawn system. There are quite a number of pretentious monuments, and also the only memorial in existence of the order of Druids. The roads through the grounds are mostly of permanent character and macadamized, and the drainage is good throughout the cemetery. There have been over 23,000 burials recorded, chiefly of Germans and German Americans. The grounds were originally laid out by Mr. Koenig.

* * *

The sixty-fifth annual report of Mount Auburn Cemetery, Boston, shows that the Repair fund, the income of which goes to the perpetual care of lots amounts to \$897,413.08 an increase of \$43,441 during the past year. The Permanent Fund, accumulating for the care of the cemetery after all lots are sold amounts to \$364,461.23 having gained \$6,106.39 during the year, over and about expenditures on buildings now under construction. These buildings are an office building and chapel. The chapel has a length over all of 116 feet, and a width across transepts of 54 feet. The office building has a frontage of 55 feet and a depth of 65 feet, and it is connected with the chapel by a cloister. The material used is Potsdam, N. Y., red sandstone. Among the receipts for the year were: Sale of lots, \$15,745.60; labor and material on lots \$59,465.14. In the expenditures the pay rolls consumed \$37,142.02 and materials \$12,800.65. The total number of interments in the cemetery 31,407.

Mr. Chas. L. Knapp, treasurer of Lowell Cemetery, Lowell, Mass., has had the following bill introduced into the Massachusetts Legislature, with good prospects of success:

An act authorizing executors and administrators to deposit reasonable sums with cemetery corporations or with cities or towns for perpetual care of burial lots. Be it enacted, etc.

Section 1. Executors and administrators are hereby authorized to deposit with cemetery corporations or with cities or towns, having public or private places therein, reasonable sums for perpetual care of any lot in such cemetery, public or private burial place, in which may be interred the body of their deceased testate or intestate, or which may belong to the estate of their deceased testate or intestate, and such sums may be allowed in their probate accounts.

Section 2. This act shall take effect upon its passage.

There is not much poetry in the following practical recommendations of the auctioneer's advertisement for sale of Tennyson's birthplace, Somersby, Lincolnshire, England. The place is often spoken of "In Memorium": "Well suited either for a country residence, or for occasional occupation by a business man in connection with the hunting, shooting and fishing. * * On the first floor, reached by two staircases, nine bed and dressing rooms. On the second floor, large attic. The domestic offices consist of kitchen, scullery, larder, stateroom, pantry, etc., and in the basement are dairy, wine and beer cellars. Stabling and harness-room, with loft over. Gardener's cottage, potting sheds, etc. Area of house, gardens and land is over fifteen acres. Rent for the whole, including sporting rights, is \$600 per annum."

Association of American Cemetery Superintendents.

G. W. CREEZY, "Harmony Grove," Salem, Mass., President.
ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., Vice-President.
F. EURICH, Woodlawn, Toledo, O., Secretary and Treasurer.

The Eleventh Annual Convention will be held at Cincinnati, O.

Publishers' Department

Park Commissioners and Cemetery trustees are requested to send us copies of their reports.

Photographs and descriptive sketches of interesting features in parks and cemeteries are solicited from our readers.

Announcement.

In pursuance of the aim which has hitherto characterized the conduct of this journal, which has been to present to its readers matter of undoubted reliability, and on technical subjects, from those eminently qualified to discuss them, the publisher is enabled to announce that among the contributors for the current year will be the following:

L. H. Bailey, Professor of Horticulture, Cornell University, Ithaca, N. Y.

O. C. Simonds, Landscape Gardener, Superintendent Graceland Cemetery, Chicago.

Fanny Copley Seavey, the well-known writer on horticultural subjects.

James MacPherson, Landscape Gardener, Graduate of the Royal Gardens of Kew.

Bellott Lawson, Landscape Gardener. Joseph Earnshaw of the firm of Earnshaw & Punshon, Cincinnati, O.

Charles Shinn, Landscape Gardener, Botanical Gardens, Berkeley, Cal.

Joseph Meehan, Horticulturist, Editor Practical Farmer, Philadelphia, correspondent of many of the leading Agricultural and Horticultural publications.

Warren H. Manning, Boston, Mass.

In the leading note of "Cemetery Notes" of the February issue the Memorial Building of ex-Mayor T. M. Allyn was erroneously ascribed to Spring Grove Cemetery, Cincinnati, instead of Spring Grove Cemetery, Hartford, Conn.

Mr. W. H. H. Whiteford, superintendent, Darlington, Md., wishes to find the name of the maker of an iron grave marker, consisting of an upright rod with a cross piece at bottom, and with an oval frame at top fitted with glass to hold a paper containing the inscription. He has a number of circulars of the well-known

manufacturers, but none show what he requires.

WANTED—Several copies of the September, 1896, number of PARK AND CEMETERY. For clean copies publisher PARK AND CEMETERY will extend the term of subscription, or pay cash for same.

Mr. J. A. Pettigrew, late superintendent of City Parks, Brooklyn, N. Y., has been appointed superintendent of Franklin Park, Boston.

Prospectus of the Children's Industrial Farm, a Horticultural and Agricultural Training School for Dependent Children. To be established near St. Louis, Office in Union Trust Building, St. Louis. This is a project worthy of the attention of the humanitarian of whatever calling. The idea is to conduct the farm and at the same time train the children, and by business and expert management make the project as nearly self-supporting as can be. A prominent figure in the work is Mr. C. H. English, who is a well-known practical horticulturist, and some of the prominent men of St. Louis are interesting themselves in this scheme.

RECEIVED.

Transactions of the Illinois State Horticultural Society for the year 1896. Being the proceedings of the forty-first annual meeting held at Springfield, December 29, 30 and 31, 1896. Also proceedings of the Northern, Central and Southern District Societies and a number of county societies for the year 1896. New series. Volume 30. Edited by the secretary, Henry M. Dunlap, Savoy, Ill.

The Tree Planting and Fountain Society of Brooklyn, N. Y., 44 Court street, Brooklyn, N. Y.

Bulletin No. 1, 3d Edition.

Bulletin No. 2, 2d Edition.

Annual Report for year ending December, 1895, Second Edition.

Circulars and other blanks.

STATE OF VERMONT. Ninth Annual Report of the Vermont Experiment Station, 1895.

MUNICIPAL AFFAIRS. Issued at Quarterly Intervals, Vol. 1, No. 1, March, 1897. A Bibliography of Municipal Administration and City Conditions. By Robert C. Brooks, New York: Reform Club, Committee of Municipal Administration, 52 William street, New York City. Per annum \$1.00. This is noticed in another column.

First Report to the Governor of Minnesota by the Park Commissioner of the State Park of the Dalles of the St Croix, 1895-1896. St. Paul, Minn. Besides the report of Mr. George H. Hazzard, Commissioner, the pamphlet contains the papers read at public gatherings in support of the park question, and which have been noticed in our previous issues.

Sixth Annual Report of the Cemetery Commissioners in charge of Wildwood Cemetery of Winchester, Mass., December 31, 1895. Also Seventh Annual Report, December 31, 1896.

Sixty-fifth Annual Report, Mount Au-

burn Cemetery, Boston, Mass., January 1, 1897.

Eighth Annual Report of the Park Commissioners of the City of Lynn, Mass., for the year ending December 19, 1896. Illustrated with half-tone engravings.

Transactions of the Cremation Society of England. No. 8. For the year ending December 31, 1896.

City of Cambridge, Mass. Annual Report of the Board of Cemetery Commissioners for the year ending November 30, 1896. With half-tone illustrations.

Report of Board of Park Commissioners, Wilmington, Del., for the year 1896. Beautifully illustrated with half-tone engravings.

CATALOGUES.

No. 38, Frederick W. Kelsey, 145 Broadway, New York, 1897. Descriptive Catalogue of Select Deciduous and Evergreen Trees, Shrubs, Vines, Roses and Hardy Plants. Address after May 1, 150 Broadway.

Descriptions and Prices of one hundred Select Hardy Perennial Plants of the Rocky Mountains. Hardy Cacti.—Alpine Nurseries, D. M. Andrews, Proprietor, Boulder, Colo. 1897. A Special Leaflet will also soon be ready for distribution.

Catalogue No. 1. Fruitland Nurseries, Augusta, Ga. P. J. Berckmans, Proprietor. Fruit and Ornamental Trees, Roses, etc.—Catalogue No. 2. Greenhouse and Bedding Plants. Spring of 1897.

Water Lilies, Aquatics, Greenhouse Plants, Ornamental Shrubbery. Lily Park Gardens and Greenhouses. George B. Moulder, Proprietor, Smith's Grove, Ky.

Old Colony Nurseries, Plymouth, Mass. Price List of Hardy Ornamentals, Shrubs, Evergreens, Roses, Herbaceous Plants, etc.

Leaflet of Chipman Bros., Sandwich, Cape Cod, Mass., giving prices of the Cape Cod Pink Pond Lily.

The Spring, 1897, Wholesale Trade List of the Nurseries of Thomas Meehan & Sons, Germantown, Philadelphia, contains an immense assortment of hardy ornamental trees, shrubs, vines, evergreens and herbaceous plants. This, with their descriptive catalogue, is of special interest to those interested in parks and cemeteries. The descriptive catalogue is a work of reference in which no expense has been spared to make it complete. For years the firm has made a specialty of catering to the park and cemetery trade with mutual satisfaction.

The Rider Engine Company and the De Lamater Iron Works, both of New York City, the well-known manufacturers of the Hot Air Pumping Engine for supplying water, have consolidated under the name of the Rider-Ericsson Engine Company. This will tend to lower prices. The firm is thoroughly reliable, and our readers will receive every consideration in negotiating business. After April 1, 1897, the office of the consolidated firms will be at 22 Cortlandt street, and until that time all communications should be addressed to the Rider-Ericsson Engine Company, 467 West Broadway, New York City.

The "Coiled Spring Hustler" is an interesting advertising sheet, published monthly by the Page Woven Wire Fence Company, Adrian, Mich. It will be sent to any of our readers interested in wire fencing upon application.

PARK AND CEMETERY.

Devoted to Art Out-of-Doors,—Parks, Cemeteries, Town and Village Improvements.

R. J. HAIGHT, Publisher,
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CONTENTS.

EDITORIAL—ARBOR DAY—PARK WORK IN EUROPE AND AMERICA.....	25
ARBOR DAY IN THE UNITED STATES.....	26
GARDEN AND PARK IMPROVEMENT.....	27
*THE HUNT MEMORIAL.....	29
PLANTING OF ROADS AND AVENUES.....	30
*ENTRANCE GATES AND LODGE, WOODLAWN CEMETERY, EVERETT, MASS.....	31
*THE LOUISVILLE PARK SYSTEM	32
*A VILLAGE MADE BEAUTIFUL—A RECLAIMED SWAMP.....	34
*GARDEN PLANTS, THEIR GEOGRAPHY, XVII	36
*LADIES' LAVATORY, PROSPECT PARK, BROOKLYN	38
BULBS FOR THE CEMETERY.....	39
*BURIAL PLACE OF TWO AMERICAN GENERALS.....	40
*COMMON SHRUBS.....	41
*A DRINKING FOUNTAIN, CHELSEA, MASS.....	42
*NEW FORM OF MEMORIAL MONUMENT.....	43
*WATER LILIES.....	44
PARK NOTES.....	45
CEMETERY NOTES.....	46
CORRESPONDENCE.....	47
PUBLISHERS' DEPARTMENT.....	48
*Illustrated.	

ARBOR DAY is a prominent feature for spring thought, for it promises so much that is good and useful for the future. It is especially proper that the young should be well grounded in a knowledge of plant life, for "Art-out-of-doors" will be the particular mark of American progress in the coming years, and the good cause will be greatly advanced by the active interest of the children. It is a cause for intense gratification that, in the legislation enacted by the several states for the observance of Arbor Day and its specified duties, the public schools are specifically encouraged to take a prominent part. The young love nature, and by fostering and educating that love into active channels, the most rapid development may be ac-

plished and results more surely secured. The Tree Planting and Fountain Society of Brooklyn, New York, than perhaps no similar organization in the world has done more practical work or disseminated knowledge on the subject of trees in a more popular and comprehensible way, has issued a special circular addressed to the children. It points out what they may accomplish in language adapted to their capacity, suggests lines of work, shows the possible results of their co-operation and offers the society's help in all the information it possesses. Every town and village should organize its Tree Planting or Improvement Association, interest the public school in its work and there is no question as to the returns. It will yield a better profit than any commercial transaction, because increasing the capital of human happiness, upon which to build higher things.

IN a lecture delivered before the Art Society of Worcester, Mass., Mr. C. Howard Walker, the Boston Architect, discussed the different methods pursued in Europe and the United States in the adornment of cities, much to the discredit of the latter. The lecture was illustrated and the contrast made the more effective, showing the utter disregard of the rules of art in the development of municipal improvements on this side of the Atlantic. The parks of the country, however, were commended as a redeeming feature, although as was stated, Americans made the mistake of allowing nature to have her own way too much. This comment is perhaps due to the architectural bias caused by dealing with regular forms and expressions; for unquestionably, the beauty and special distinctiveness of the American park is the naturalness marking its planning and development, and the evident tendency of the cultivated landscape gardener to follow nature's methods in her highest expressions and assist her in her wonderful displays, rather than to train her to ways of his own. The public park affords opportunities of keeping to nature's standard as a buttress against which a national style can safely stand, and it is this support which is giving strength to the idea that the American park must be the standard of landscape art.

ARBOR DAY IN THE UNITED STATES.

Arbor day is rapidly becoming characteristic of the energy with which the American people take up a good cause, when once the benefits to be derived are understood and appreciated. It is a sign that the destructive policy of a cruder civilization is being replaced by the constructive ideas prevailing in a higher cultivation.

At first designed to make good in some comprehensive scheme, the ravages of the commercial spirit in denuding Nebraska of its forest growth, it has spread to a majority of the states, and not only includes the planting of forest trees, but also in many legislative enactments that of fruit, ornamental trees and shrubs and flowers, and moreover especially urge the public schools to take a particularly prominent part in the work allotted for the day.

To endorse the suggestions of the proclamations issued by the governors of the various states, is to emphasize an object worthy of the active sympathy of every citizen. With the intelligence of the American people, their advanced station in educational privileges, and the immense natural resources at their command, there is no reason why this country should not, in a sense, become a broad garden, with intelligent improvements constantly in progress.

To arouse a spirit in the school children in harmony with the beautiful ideas involved in Arbor Day, is to stimulate them towards a higher order of life, and to infuse into them a love of nature which will endure through life. One of the best efforts looking to the cultivation of higher aims and principles in the young to-day is that of improving the school house grounds. Hitherto this has been neglected, as may be readily observed on inspecting the majority of city school yards. If there is anything more conducive to counteracting the good imbibed inside the school house, it is the desert air of the school yard. Arbor Day in the school yard will effect a reformation whose benefits will be incalculable.

The following extracts from proclamations just issued are worthy of careful and active consideration:

Governor Hastings of Pennsylvania says: "We have learned the lesson that trees and the forests are essential to our continued prosperity and that he who plants a tree, whether boy or man, is a public benefactor. * * * Let the people choose the day which they deem best suited for tree planting and teach the children how to select trees for fruit, for shade, for fuel and for timber, how to plant, protect and foster the several species of trees, vines, shrubs and flowers, and how to use all these for economic and æsthetic purposes. Let every pupil learn what the forests do, how they hold the rain and the snow, feed the springs and the rivers, stay

the floods and the freshets, and temper the summer's scorching sun, and the winter's chilling blasts. In the orchard and the field, about the home and along the highway, upon the school grounds and on the barren hillside let trees be planted for use and for beauty, thereby adding to the charms of life in beautiful Pennsylvania."

Governor Lowndes of Maryland, says: "I especially recommend to parents and teachers in the Public Schools, that they encourage their children, or those under their influence, to plant or transplant at least one forest shade tree on that day, by the side of a public road, or about their school house or home."

Governor Steunenberg of Idaho says: "I recommend that not only the authorities, but all classes, join in an effort to carry out the spirit of this useful and beneficial legislation to the end that the surroundings of our public institutions be beautified, our highways adorned, and the love of Nature and her wonderful works stimulated and refreshed."

Governor Cooke of Connecticut: "I recommend that the people of this state observe the day in the spirit of the statute, by planting fruitful and ornamental trees, shrubs, vines, in the orchards, along the hillways, and around the homes and school houses, and that the teachers and pupils in public schools engage in exercises appropriate to the day."

Governor Pingree, of Michigan: "I also recommend that this day be devoted to the general planting of trees, shrubs and flowers, to the end that lawns, schoolgrounds, public parks and streets and highways may be permanently enriched and beautified, and that a tree be planted for every member of each family. * * * I take this occasion, to urge better care of shade trees which abound beside our country roads."

Nebraska claims the Arbor Day as its own, and credit is given for so wise an institution to the last secretary of Agriculture, J. Sterling Morton, who began agitating the matter, and passed a resolution in the State Board of Agriculture for setting apart a day, as early as January 4, 1872. The law was incorporated into the statutes in 1885. It has become very popular. In his recent proclamation, Governor Holcomb says: "Especially do I recommend to the Public Schools the propriety of an observance of the day by suitable exercises and practical lessons in tree planting, in order that there may be inculcated in the minds of the children of the state a high appreciation of the pleasures, enjoyment, and utility, to the present and future generations, of tree planting and timber preservation."

This annual institution has been taken up by the citizens of the state with great spirit, and the Public School authorities have issued a very comprehen-

ive and carefully arranged programme of exercises for the children of the public schools, containing the history of the origin of Arbor Day, its cause and reason, and some beautiful quotations from the poets and writers endorsing the objects to be attained.

Governor Tanner of Illinois says: "The importance of tree planting here cannot be overestimated. Let every household plant a fruit tree, whose fruit shall refresh children yet unborn; let every farmer plant a shade tree in his pasture for the benefit of his horses and his cattle; plant trees to commemorate the birth of offspring; plant them by the graves of the dead; plant them along the roads and highways; plant them in the yards of your schools and houses."

Dates set for the observation of Arbor Day:

Connecticut—May 7.

Illinois—April 20.

Idaho—May 7.

Kansas—Proclamation not yet issued. Kansas has no statute recognizing the day, but it has become a custom of the people and the governor issues a proclamation accordingly.

Kentucky—The governor issues a proclamation in the Fall calling attention to Arbor Day.

Maryland—April 14. Maryland designates the day as Arbor and Highway Day.

Massachusetts—By statute for the last Saturday in April.

Michigan—April 30. Michigan passed its laws recognizing Arbor Day in 1885.

Minnesota—April 30.

Montana—Proclamation not yet issued.

Nebraska—April 22.

New Hampshire—May 1.

New Jersey—April 30.

North Dakota—May 7. North Dakota has no law on the subject, but a custom has been established.

Ohio—Proclamation not yet issued.

Pennsylvania—Owing to differences in seasons in the state two days are designated, April 9 and April 23.

Rhode Island—By statute set for second Friday in May.

Texas—February 22.

Vermont—Day will probably be set for May 7.

Wisconsin—April 30. Wisconsin makes the day Arbor and Bird Day.

The foregoing extracts from current proclamations will give an idea of the ground desired to be covered by the observance of Arbor Day in the economy of the nation. There might be added to these the desirability of planting memorial trees in church yards and cemeteries. Trees make beautiful memorials, provided a judicious selection is made of the kind most suitable for the climate and ruling conditions, and care be taken in the planting and establishing. In the planting of trees and shrubbery for the more decorative purposes, as suggested in many of the proclamations, careful consideration should be given to the matter beforehand, and competent advice sought for the work of arrangement and grouping, so that not only the best results may

be obtained so far as success in healthy growth is concerned, but that the best effects either in regard to the immediate vicinity or to the general landscape may be of a certainty secured. In connection with the fast growing interest in landscape art, and the advantages of surrounding ourselves with nature's choicest offerings, Arbor Day will serve as a yearly renewal of activity in this direction and hasten the proper development of refinement in our homes and country.

GARDEN AND PARK IMPROVEMENT.

There has been an immense improvement in various directions during the last quarter of the nineteenth century, especially in the production of florists' flowers, and in the establishment of public grounds. In villa gardens, too, there begins to be some improvement, and the disposition to revert to the herbaceous and mixed gardening of long ago will, if properly taken in hand, immensely vary the possibilities, improve the appearance, and intensify the interest in the country.

The methods by which the roads and villages may be made more attractive are many and various, but the simplest, cheapest, most obvious and direct, is to plant something and cover the bare places with sightliness and verdure. Individual effort can do much, but the combined effort of the village societies will surely be the means through which the most telling and effective reforms will be effected. And it will pay, depend upon it, to render the villages restful and beautiful. The bicycle in this connection will play its part and bring summer residents from the cities to the most attractive places; this may not always be an unmixed advantage, but if properly taken into consideration, the greater facility of travel cannot be other than a progress.

Many of the readers of PARK AND CEMETERY will desire to know how to proceed, and as few things can encourage the beginner more than having something new and attractive for the admiration of his neighbors, we recommend the study of the best catalogues in connection with the series of papers appearing in our issues on the Geography of Plants. It will be seen that the great bulk of our northern ornamental trees, shrubs and plants are from the cold temperate regions of the northern hemisphere, while those which can be grown at the south and the Pacific coast are from the warm temperate regions and the tropical mountains—not only of the northern, but often of the southern hemisphere, while hundreds of tropical annuals are yet untouched. Many of our readers will thus be able to write to friends in the missionary field or in the consular service for seeds of the finer plants not already found in the catalogues, for although it is

perhaps a fact that the botanical knowledge of these gentlemen has been but poorly developed, yet they will find in almost every country Britons or other Europeans who have had greater advantages. In the British Empire particularly the curators of the botanic gardens are excellent men to apply to—in fact, many of them keep seeds for exchange, and it is a pleasure to them to find anyone interested in fostering the cultivation of plants. They can always give information which will prevent the sending of seeds already common in cultivation.

But the best of our nurseries have hundreds of species that are rarely seen, and no more satisfactory method presents itself than visiting them. You will not find them in every part of the country, however, and catalogues must be depended upon. At present the greatest herbaceous development is in the Northern States. The south and California have, however, a few exceptionally good nurseries for trees and shrubs adapted to those sections.

In mapping out a scheme for improving the planting of a village don't copy one another. You may mix things, and the same mixtures from one end of the country to the other will be monotony. Aim to give your villages some distinctive character in playgrounds, gardens, fine avenues, good and uniform sidewalks and roads, and rather make a feature of a particular alliance of plants than monotonous mixtures.

If you confine your efforts to a majority of the plants of one alliance your planting will be distinct.

If you mix up one or two hundred plants drawn from all the alliances and repeat them throughout the country your planting will differ but little from the rest of the landscape. It will be a monotonous mixture, and lack individuality and character.

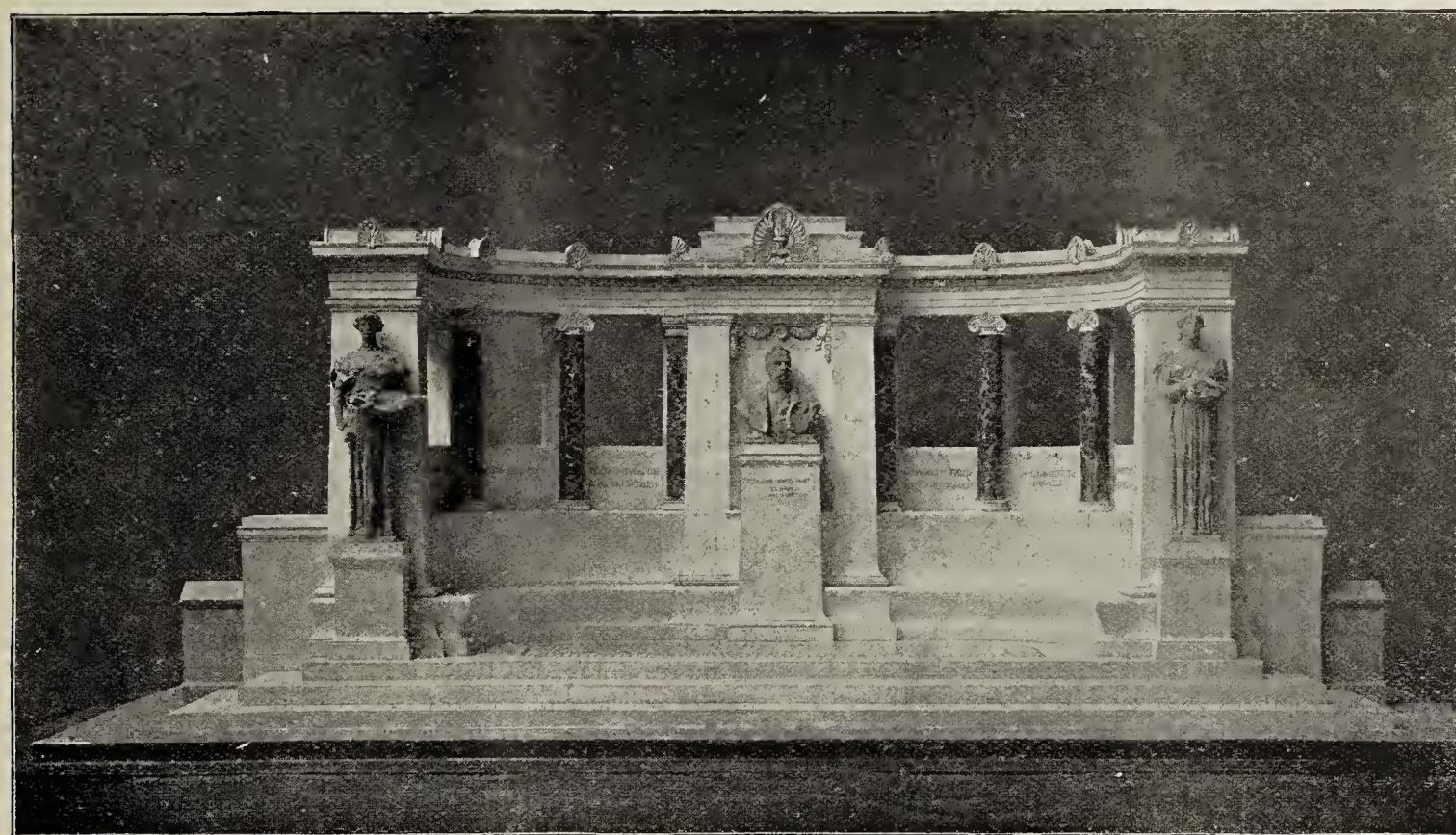
Then there is much to be effected in concentrating your display of flowering plants, so that they will be effective in one or more seasons, say in the spring and autumn for the gardens of those who leave home in the summer, and in the months of July and August for the gardens of the seaside and mountain resorts. It is a wasting of fragrance on the desert air to have plants blooming at a season when they are but little seen.

It is quite feasible to combine all of these things or any of them with such a disposition as will afford at least a primary knowledge of the scheme of scientific classification, and thus facilitate knowledge by the best of all object lessons, the gardens and plantations themselves.

As an illustration of what may be done in these directions let it be supposed that a village desires to have their principal display in the spring (chiefly during May north), and among a generous planting of the conifers select the early bloom-

ing Magnolias, the Akebia, Berberis in variety, Calycanthus, Tree Paeonia and Xanthorhiza. The spring flowering Tamarix parviflora; Acer rubrum, for its flowers, which are often yellow, however, or yellowish; the Horse Chestnut; Xanthoceras sorbifolia, and Rhus aromatica. The red buds Cercis Canadensis and C. sinensis; Amelanchiers; Caraganas; Cydonias; Hawthorns; Deutzia gracilis and parviflora; Exochorda; Kerria Japonica in vars.; Prunus Davidiana, Americana, Mume, Persica, Padus, Japonica, pendula and several others; Pyrus coronaria and its variety angustifolia with semi-double flowers, Parkmanni, spectabilis, Maulei and others; Rhodoty whole kerriodes; Rosa alpina and Austrian briars towards the end of the month in the Middle States; Ribes; Spirea prunifolia, Van Houttei, Cantonense, and Thunbergi. Cornus florida and its rose-colored form, and the variegated and other varieties of Cornus mas. Diervilla Stelzneriana and others towards the end of the month south of the New York latitude; several Bush honeysuckles; Sambucus racemosa; snowberries; Viburnum opulus towards the end of the month. Rhodora Canadensis, a few of the early Rhododendrons, although these are not to be depended upon north of Philadelphia until the end of the month, and not at all on the prairies, for they are mountain and hill plants; a few vacciniums, and Erica carnea also bloom very well during May in some localities. Epigaea repens is a difficult subject sometimes, but the sweet little thing is worth buying in pot-grown plants. It is queer that this should prove so difficult in its own climate, for the older British gardeners deemed it as easy to increase as Heather—in moist soils at any rate—but they moved them in the autumn, not in the spring. Suppose gardeners try this? Halesia tetraptera and its varieties are the snowdrop trees. Jasminum nudiflorum and the Forsythias are too early if anything, and have scarcely anything to accompany them among shrubs.

Fraxinus ornus and several Syringas (lilacs) flower towards the end of May. So also does Paulownia Imperialis from Central New Jersey southwards. Then there is the Sassafras, the Lindera, and two or three Daphnes. A few of the Alders, Bitches and Willows are also interesting, and even pretty. This is quite a list of spring flowering trees and shrubs of various sizes, which may be grouped splendidly in Alliance as I have written them, or mixed according to fancy. They would be far better accompanied by masses of the flowering herbs, however, of which there is a large number flowering during May. It would make this paper too long to indicate them, and hints as to arrangement must be altogether postponed to a future time.



*PROPOSED MEMORIAL TO RICHARD M. HUNT. PHOTOGRAPHED FROM PLASTER MODEL.
DANIEL C. FRENCH, SCULPTOR; BRUCE PRICE, ARCHITECT.

"THE HUNT MEMORIAL."

At the close of the nineteenth century a new day in art is dawning.

America will at last honor an artist memory.

Sculptured gods and goddesses, saints and glorified virgins, warriors, philosophers, poets and statesmen are partly to lose their glory.

Mr. Bruce Price, the architect, and Mr. Daniel C. French, the sculptor, have laid down their traditional tools to give shape to a memorial to be erected by the various Art societies in memory of their fellow-worker, Richard Morris Hunt.

* * *

The memorial is to be built of white marble, graceful and elegant piers and colored marble columns, a bronze bust of Hunt, and figures representing respectively Architecture, Sculpture and Painting.

* * *

The plan is ellipse in form; the fundamental principle is the Greek Ionic exhedra, approached by three steps leading upon a stylobate of richly colored mosaic.

The central portion or main body is a curtain wall, excepting that a niche between two pilasters forms a background for the bronze bust that is placed on a simple pedestal, on the face of which is inscribed:

Richard Morris Hunt

Oct. 30, 1828.

July 31, 1895.

* * *

The base course, occupying a space between the central portion and end terminations, forms a seat and substructure, from which rises the ante-piers and colored marble columns that support the architrave cornice that is carried through to the terminations or end piers and crowned with Acroteria.

On panels between the ante-piers and architrave cornice are inscribed the following societies: National Academy of Design, Century Association, Metropolitan Museum of Art, Municipal Art Society, Architectural League, National Sculpture Society, Society of American Artists, American Institute of Architects, American Water Color Society, and Society of Beaux Arts Architects.

Rising from the stylobate, in front of these subordinate or end piers, are simple pedestals supporting in strong repose the marble figures representing the fine arts, while flanked on either side of these end piers or extremities are larger pedestals rising from the lower steps and flanking into the park wall. The total length over all is 30 feet; depth, 12 feet; height, 14 feet.

* * *

The memorial will cut into the wall of Central Park somewhere between the Lenox Library and the Metropolitan Museum of Art, New York City.

A more fitting site for this stately and truly elevating expression of art and nature could not be desired.

Placed in an environment, where life seems but a dream, and amid those free institutions, for wisdom, this noble tribute to the great dead architect will rise as a living example to the literate and masters in art. To the poor, struggling novitiate it will be an example of stateliness, of simplicity, of reverence, and will help to quicken the imaginative and spiritual to purer and higher emotions similar to those found in nature, because of its faithfulness to beauty. Beauty being the foremost characteristic of all great artists, beauty is the very quintessence of their genius; beauty, that which keeps them in communion with their vision.

* * *

Its other duty is to the poor devotee of the every day hum-drum duties of life. Tired and weary in body and spirit he will stand before this great pile, perhaps in no condition to appreciate art, and yet this living pile will come out to him.

Why will it go out to him? Because of the fundamental motive? No, but because of the relationship it bears to nature; the *passivity* in it—again physical, natural, moral and spiritual beauty, the simple motive and self-glorification of color (light and shade), the tender rendering of lines, the chaste figures and colored marble columns and mosaic floor.

* * *

Who cannot find these things in nature? Who, with the vision, ever stood on Mount Mansfield and viewed in the distance the peaks of the White Mountains could not see the same white piers and colored columns and beautiful sweeping curves; or ever failed to see flanked by the mountain side reposing spiritual figures, or failed to see amid the lights and shadows of the plains and the matchless grass that spreads away for miles on every side in varied colors, a grand and beautiful mosaic?

* * *

I will admit, Mr. Critic, that some of the masses are not perfect. Suppose we do turn again to the range of the green peaks below us and remove one of them, would it improve the view? It might from where we stand, but let us go down in the valley and there we will find the reason for their existence.

In the valley again see the land of the "All Wise," see the vision, everywhere myriads of exhedras faintly blushing in solitude and grouped together in almost ideal beauty welcoming the traveler to rest under their soothing influence.

* * *

Mr. French and Mr. Price have both given us again an expression of that which is foremost in

their minds—life, love, purity, strength and that sublime strain of aspiration that runs through their work.

Augustus Lukeman.

PLANTING OF ROADS AND AVENUES.

Mr. William Saunders, in a paper read by him, gives the following on the subject of Planting of Roads and Avenues:

"In the planting of straight roads and avenues it is essential to preserve regularity of line, as also uniformity in the color and shape of the trees. The nearest approach to the sublime in landscape gardening is in effects produced by extended uniform lines of trees. Continuity of line and uniformity of object, when combined with great extension, produce sublimity. Objects are sublime which possess quantity and simplicity in conjunction. * * * To produce this effect it is therefore imperative that only one variety of tree should be used. Anything that tends to break up the uniform continuity will at once destroy it. A straight avenue planted with a variety of trees of varied forms, some broad and spreading, others tall, pointed and spiry, is as much at variance with good taste as would be a Grecian facade furnished with columns embracing all the different orders of architecture. Among the best trees for planting wide avenues are the tulip tree, the sugar and the silver maple, lindens, sycamore, walnuts, oaks and chestnuts. For narrower roads, those from sixteen to twenty feet in width, the Norway maple, the black and white ash, the horse chestnut and those of kindred habit will be more suitable.

"On long and wide avenues, in positions where a side view of the lines is prominent, the wall-like effect may be very much softened and toned down by setting a double or even triple row of trees, and this will be still further increased by planting each opposite row, respectively, with a distinct kind. An avenue of tulip trees will in this arrangement be well supported by an outside line of red maples, their forms will blend pleasingly, and the contrast of their spring verdure and autumn colorings will be agreeable. In a similar disposition the sugar maple, sweet gum and ash-leaved maple may be used. Such combinations may be indefinitely varied and adapted to the embellishment of avenues as their extent and importance may demand or require.

"In planting curving roads, the disposition of the trees will obviously be determined by the general character of the grounds through which the road passes.

"In places of six to ten acres in extent, and in form nearly of a square or parallelogram, with the mansion placed 100 yards back of the front line, the entrance gate may be judiciously set near one of the corners, and the road gradually curve to the building. A single continuous row of trees on one side of this road would have a monotonous effect and a row on each side would destroy and completely break up any attempt at breadth of view. The road should rather appear to curve round and pass through masses of trees and shrubbery plantations. While attention may be given to partially shading the road by placing suitable trees mainly on the south



ENTRANCE GATES AND LODGE, WOODLAWN CEMETERY, EVERETT, MASS.

and west sides, yet these shade trees should form only a portion of groups, with an occasional isolated single specimen tree; or, what is still better, two trees of the same kind set six to ten feet apart, so that when they grow up they will give a distant appearance as of a single tree, with the additional variety of aspect when closely viewed. The planting of groups should be more extensive and massive on the inner circle, around which the road will curve, with frequent open vistas looking in upon the lawn. The width and length of the road and extent of lawn will designate the size of the groups, and also suggest the particular kind of trees and shrubs of which they are to be composed. Shade trees may be thus introduced in sufficient quantities, even on winding roads, to answer the combined purpose of shade and garniture, without producing an appearance of strained effort to secure it.

"Where the road is wholly on the southern side of the dwelling, deciduous trees should be used in front or near the building. If the entrance and the road are north of the house, a straight avenue of evergreen trees will form an admirable feature, if ample space is allowed for both road and trees. The Norway spruce is, perhaps, the first choice of tree for such planting. The hemlock spruce is the more graceful and the best adapted to short roads or narrow grounds. The Austrian, the Scotch and the white pine may be used where the grounds are extensive. Even when the Norway spruce is used the parallel lines should be 60 feet apart, not only to admit of sun and winds to act directly on the roadway, but also to give ample room for the spread of the lower branches of the trees, and in no case should they be planted nearer than sixteen feet from the edge of the road, and when the larger and more widely-spreading pines are used, a space of at least twenty feet should be given. A very meager effect will result from planting close to roadways, narrowing them into mere strips, which for at least one-half of the year are seldom dry.

ENTRANCE GATES AND LODGE, WOODLAWN CEMETERY, EVERETT, MASS.

Woodlawn Cemetery, Everett, Mass., is to be improved by the addition of elaborate Entrance Gates, Lodge and other accessories as shown in the accompanying sketch. The trustees selected

the "design of Mr. William Hart Taylor, architect of Boston.

The principal features of the plan are the massive wrought iron gates, an imposing monument surmounted by the figures of four angels, the lodge, court-yard and fountain.

The lodge in design is of Græco-Roman style, built of buff brick, terra cotta and Indiana limestone. A tower rises above the facade and low sloping roof of Spanish tile, supported by a series of columns, with ornamental cresting and finials of sea-green faience. A series of six windows is separated by columns. The sea-green faience appears throughout the decorative work and with the decorative medallions, the doorway with ornamental lanterns, the copper crestings in green finish, will tend to make a beautiful building.

The main entrance is through the tower into a hall-way paved with Italian terrasso. On each side of a faience mantel are cathedral windows of stained glass. A fountain and an ornate radiator surrounded with a Greek design in colored marbles, are features of the main room. It is finished in quartered oak. Adjoining are the superintendent's office, designing room, toilet arrangements and a fire-proof vault.

Next to the lodge, on the right, is the entrance, the driveways leading on either side of a monument of Concord granite, with four angels blowing trumpets, and surmounted by a Greek temple in miniature supported by columns of faience. The entrances for carriages and foot passengers are through massive gates of ornate wrought iron, between posts of granite, each surmounted by a ball. The walks are laid in granolithic and approach in a graceful sweep past the lodge and fountain.

The Lincoln Memorial Elm, on the Presidential Mansion grounds, which blew down last year, was replaced by President Cleveland last fall. Such memorials should be instituted more than they now are. They are always pleasing and instructive.—*Meehan's Monthly*.

THE LOUISVILLE PARK SYSTEM.

The three principal parks of Louisville, Ky., are named Iroquois, Cherokee and Shawnee—a happily selected nomenclature that is poetic, suggestive and appropriate, for that "enchanted wilderness," Kentucky, was the chosen hunting ground of the



SHELTER HOUSE, CHEROKEE PARK.

red men, and so beautiful that it may well have typified to their poetic but untutored minds the "happy hunting grounds" of the Indians hereafter.

Not only are the names well selected, but they are fittingly applied, for the 306 acres of lovely hill, dale and sylvan shade, christened Cherokee, fairly represent the leading characteristics of the beautiful country on the upper Tennessee river and its branches that the agriculturally inclined Cherokees chose for their own; while the bold, wooded knob—the outpost of those that here skirt the southern side of the valley of the Ohio—that dominates the 550 acres known as Iroquois aptly stands for the "warlike and powerful" tribe which more than two hundred years ago made life a burden to the peaceful Shawnees, whose "numerous villages tenanted the shores of the Ohio, then and long afterward known as the Wabash." And thus the name Shawnee is equally fitting for the remaining park of 167 acres lying directly on the south bank of that stream, views of the river and of the Indiana knobs across it constituting its chief attractions.

* * *

The Louisville park system is a part of the outcome of the spirit of park making that has obtained in the United States since the Centennial year, or about that time, and is on a scale commensurate

with the most advanced thought regarding the necessity for ample reservations for public breathing spaces, and for securing them before the value of appropriate and accessible land advances beyond reasonable limits.

The parks are on three sides of the city, the river furnishing open space to the north. Iroquois, five and a half miles south of the Court House, has the well made southern parkway as an approach for the last two and three-quarter miles which, being a part of the system, increases its area to 601 acres. Cherokee is two and three-quarter miles east, and Shawnee three and one-half miles west of the Court House. Eventually, no doubt, the three will be linked together by driveways.

* * *

The Park Board is handicapped by lack of funds, the large appropriation made by the city some years ago being by some technicality unavailable without further legislation. But the parks are being gradually developed according to plans by Messrs. Olmsted, Olmsted and Eliot who, after their well-



BEECH WOODS, IROQUOIS PARK.

known artistic designing, are preserving and emphasizing the natural features of each, while skilfully adapting the grafted improvements to the peculiar opportunities offered by each. The leading idea in the development of Iroquois is the preservation of the splendid woods, and of fully developing the



Kentucky
Coffee Tree.

Honey Locust. American Birch.
TYPICAL TREES, CHEROKEE PARK.

possibilities of successive views over the valley. The most important feature of the improvements is a driveway leading to the summit of "Burnt Knob." It ascends by gradually broadening sweeps alternating with short curves, always turning back on its own path, but constantly attaining a higher level, till the last wide sweep carries it quite around the summit, ending in a concourse on the brow of the hill. From this lofty outlook above the tree-tops there is a magnificent view of the city lying several miles across the level valley, in the almost perfectly shaped horseshoe bend of the Ohio. It is a goodly scene, suggesting peace and prosperity, and it is good to know that this, the one point of vantage in the landscape, is secured for posterity with its natural beauty unimpaired.

* * *

The striking formation known locally as Burnt Knob is composed of soapstone clay underlaid with soapstone, and it washes so badly on exposed slopes that growth of any sort is established with difficulty. The driveways are preserved from washing by tile cross drains every two hundred feet. But the Knob is, in the main, clothed from base to summit with fine forest trees, including great numbers of splendid chestnut oaks and of beeches. There are also the American and winged elm, ash, poplar, hickory, tulip, basswood, hard maple, hackberry and red cedar in abundance. At the top, at an elevation of 358 feet above the city, lies a natural meadow with an area of from twenty-five to thirty acres as free from trees as an Illinois prairie,

though quite surrounded by a fringe of them that melts into the heavy growth that drops down the hill in all directions.

Although the Knob is the salient topographical feature of Iroquois Park, a large part of the site is made up of foot hills, outlying slopes, and valleys, mostly wooded with native trees, such as the swamp maple, sycamore, sweet and sour gum, paw-paw, sassafras, persimmon, dogwood, willows, plums, etc. Several small streams give variety to the landscape.

* * *

On the long southern slope of Burnt Knob lies a section called Fenly Wood, almost entirely covered by a growth of magnificent beeches, many of them of large size. Here one feels at once the influence of the poetic atmosphere peculiar to beech woods, which seems to exhale the impalpable presence of the days of pre-civilization, turning one's thoughts to the graceful freedom of wild deer and the gentler side of life in the wilderness. It seems fitting to find on the smooth bole of a grand old beech the carved légend:

Z. Taylor,
Deer Hunt,
1835.

Which bears the easily verified stamp of being President Taylor's own signature. On another tree, also a beech, at a little distance from the first is cut:

Hancock Taylor,
1835.

The first is spoken of in Louisville as the "President's tree," and both were discovered only two or three years ago. In the valley on the outskirt of this wood stands a well preserved log cabin that is known to have been used as a hunting lodge by President Taylor and others when deer hunting in the lovely wilds of Kentucky.

* * *

The two trees mentioned and numbers of others among the oldest and best of the beeches are more or less decayed at the base of the trunks and are being in a measure restored, as well as the progress of decay materially retarded, by taking out all of the rotten wood from the hollow trunks and coat-

ing the interior with liquid coal tar. Then timbers cut to fit the openings and dipped in tar are set in cement made of pulverized slate and tar, and the work finished by an application of hot tar over the outer surface of the patch.

* * *

A nursery is maintained in Iroquois Park, where young trees are grown and prepared for use throughout the park system.

* * *

Cherokee Park is topographically charming, being a succession of typical Kentucky landscapes. Beargrass Creek runs through it and introduces a variety of hill, valley, long grassy slopes, wooded hillsides and tree-crowned heights, together with knolls showing fine scattering specimen trees in great variety, and quite free from undergrowth. And everywhere runs the undulating, or evenly spread, carpet of natural turf of the famous Kentucky blue grass, so called, but not, I believe, indigenous. It is said to have been introduced by seeds scattered from the saddle bags and wagons of the long procession of pioneers that in early days filed along the historic trail through Cumberland Pass.

* * *

The natural sylvan beauty of this tract makes it the most attractive of the three, and it has special interest as a park in that it is one of the few in this country where it is sought to combine the practical features of an arboretum with landscape effects. With native species of trees growing indigenously are to be grouped others of their genus, making as complete an exhibit as is possible with the conditions of soil and climate offered. The location of these groups is clearly indicated in the planting plans, willows and other moisture loving trees being placed in their natural positions in the valleys and near the stream, and others in like manner in their proper environment. At the same time equal attention is given to their value as features of the landscape. All are to be labeled, so that the educational side of the arboretum idea will be well developed.

* * *

Many miles of driveway and of walks are already completed in Cherokee, and several bridges and shelter-houses built. The latter are of the same design throughout the system, their appearance being shown in the illustration, and each is designated by an appropriate name, such as "Overlook" and "Tarryawhile."

* * *

From its size, character and location Shawnee Park is well fitted for the decorative style adopted in its development. The leading feature of its im-

provement is a formal avenue, bounded by flower beds and bordered by lines of Oriental Plane trees set forty feet apart and two years planted. It runs parallel with the river and is broken midway by a music stand and circular concourse, and ends just where a bend in the Ohio gives a long perspective down the stream. And along its entire length there are excellent views of the Indiana Knobs directly across the river. Much space is given to summer bedding, and there is quite an extensive range of greenhouses. Interest centers in the river views, however, and the admirable location of this little park is of special value because it sets apart a mile of the choicest river front for perpetual use by the people.

* * *

Five public squares scattered through the city are also under the control of the Park Board. They are Dupont, with an area of seven acres; Boone and Baxter, each about four acres in extent, and Logan and Kenton, each but narrow strips.

Also the Court House grounds, containing about two acres including the space occupied by the building, and the City Hospital tract of some four acres. Some border plantations set out in 1895 and 1896 on the Hospital grounds promise to greatly improve their appearance from within, and even more from without.

* * *

The whole system shows wisdom and foresight that must command growing appreciation as the years pass.

Fanny Copley Seavey.

A VILLAGE MADE BEAUTIFUL. A RECLAIMED SWAMP.

The traveler to England who does not cross the water from the mainland to the Isle of Wight, will miss pleasures which no other part of the Kingdom affords. And especially will he miss it if he does not take in the Undercliff, which is on the south coast of the Island, and extends from St. Catharine's to Shanklin, a distance of about six miles. Bonchurch is a lovely and secluded village towards the eastern end of it. With the towering hills at the back of it, the sea not far from its front, and luxuriant vegetation on every hand, its beauty surprises and pleases when walking along a shaded rural road from Ventnor, one emerges on the main street of the beautiful village. So luxuriant is the growth of the trees, shrubs and vines that many a fine residence is completely hidden from sight, nothing but a rustic gate or entrance way here and there suggesting a residence further in beyond the sight. Almost at the entrance to Bonchurch is the lovely piece of water called Bonchurch pond, bordering the public road. A greater attraction to a village



VIEW NEAR BONCHURCH, ISLE OF WIGHT, ENGLAND

or a more beautiful scene would be hard to imagine. The illustration which is herewith presented of it gives an idea of its beauty, but it must be seen as I saw it on a warm summer's day two years ago, to fully appreciate it.

And when I say that this lovely sheet of water was a reclaimed swamp, made what it is by the landscape gardener's art, is it not an instructive picture to look on? It shows what a very little work will sometimes do, for, evidently, there was not great expense in the making of this pond. It is said that "chills and fever" was rife here before the change was made, while now invalids flock to the place to regain their lost health. At the time of my visit it was the close of June, and the verdure of the trees was enchanting. The large elm which overhangs the roads was at its best, as were the oaks and willows seen on the opposite side of the water. There had been a few flowering shrubs planted along its border, but not many. There it was that I saw for the first time in England the now common Japanese shrub here, *Hydrangea paniculata grandiflora*, and in an enclosure a little further away was the *Choisia ternata*, a shrub with lovely white flowers, which unfortunately, is not hardy north of Washington. I passed this pond about noon and, as many others were doing, I lingered long gazing at its beauties. It was near evening when I saw it again, and many couples were wending their way towards it, and many more were there, sitting on the stone wall. It had been a warm day but the sun was then hidden by the large trees in the background, and the hour and the place were both enticing. As the poet Moore says in "The Vale of Cashmere":

" 'Twas when the hour of evening came
Upon the lake, serene and cool,
When Day had hid his sultry flame
Behind the palms of Baramoule."

The view across the street from the pond shows a line of cottages typical of many others in the progressive towns of the Island. The low stone wall, surmounted often with a low iron fence, is sometimes seen, but often only the wall itself. Sweet bays, Portugal and common laurels, laurestinias, *Euonymus Japonica*'s and *Auculas* are much used. Fuchsias in the shape of large shrubs are often seen, and in its season, from June till November, the lovely climbing rose, *Gloire de Dijon* can be seen, often mingling with the *Clematis Montana* from almost every house. Then here and there an ivy covered wall is seen. The pond and its background of verdure, the pretty cottages en-sconced in shrubs, vines and flowers, the smooth macadamized road and the tree clad hills in the distance, together made such a romantic picture, that it gave me uncommon pleasure to obtain a photograph of it for PARK AND CEMETERY.

Joseph Meehan.

A correspondent from Henderson, N. C., says in *American Gardening*: I want a pure white rose, a profuse and constant bloomer, to plant on a grave. I purpose pegging it down, to make a bed of roses. The monthly roses are hardy here, blooming usually from spring until Christmas. What variety do you think likely to afford the greatest satisfaction?

Our contemporary replies: The Bride, the finest white Tea in cultivation, is a good bedder in your locality, and would, we think, afford satisfaction. We have had no experience in pegging it down, but see no reason why it should not do well, if the leading bud be pinched out to induce side breaks. The Nipheta, a very beautiful white Tea, though more delicate in growth than the Bride, is a good bedder, and, in greenhouse culture, is often bent over to take advantage of the limited space on a side bench. It does very well under such circumstances; it increases very much in vigor when left undisturbed for years in the same place. Some of the Polyantha roses, such as Aimee Vibert, which produces a profusion of small, double, white flowers in white shading to pink in the center, make extremely satisfactory bedders. The little trailing Japanese Wichuriana rose should do well for your use; its season of bloom, however, is not very long. Before planting any rose in the cemetery care should be taken that the soil is properly prepared, or success cannot be expected. If the soil is very poor and dry, as is usually the case, dig a hole in the place where the roses are to be planted, replacing the earth removed, with a good compost of sod and well-rotted manure.

GARDEN PLANTS—THEIR GEOGRAPHY, XVII.

ROSALES. (B.)

THE GENISTA, ROSA AND DROsera ALLIANCE.

(Continued.)

The rose-like flowers will be touched upon in this paper. The irregular or regular leguminous tribes have bean-like pods, or drupaceous fruits like Dipterix. The regular flowers of legumales, however, are likely to be bean fruited, or the pea flowers are occasionally followed by an almond like fruit.

The rose-flowers of this section are regular, and their fruit is a follicle—often merely the neck of the calyx. The seeds microscopically examined differ but little it is true from peas and beans, and the Tonquin bean differs scarcely at all from the peach. The fleshy coverings are not deemed of permanent value, but it may be pointed out that raspberries and strawberries are built up of several drupes, constituting the fruits, while potentillas scarcely at all distinguishable in flower, have dry fruits, quite destitute of pulpy covering.

Such instances briefly sample the grounds upon which botanists rely for purposes of identification. The trouble seems to be that they seek too far for solid understanding, and few better examples occur than among the plants of this alliance. Any child can distinguish between the normal types of beans and roses, and why abnormal forms should be seized upon to swell a group of immense proportions, and unite it to these equally well marked ones, also of great size, is (if not) a mystery, an inconvenience in garden arrangement.

Abnormal forms might hold together very many alliances with as much reason.

But these things are explained upon tons of paper, with hogsheads of ink, laid on by hundreds of steam horses, for the instruction of a few.

It will be said that the *orders* offer the desired boundary lines, but I am not considering the *orders*; they have been found wanting as the basis of garden groups—very wanting indeed, besides ninety-and-nine in every hundred of humanity ignore them, because they are difficult to remember, loaded with endless synonymy, embellished with wonderful terminology, and indicate the unattainable. *Orders* are impracticable for ornamental purposes.

Common people want a half hundred groups of plants which can be variously arranged in the gardens of most climates, and capable of affording a synoptical idea of the vegetation of the earth.

Then perhaps with carefully selected ornamental material, and brief descriptive hand-books, they could begin to regard exact plant lore with some favor.

As it is I have heard a distinguished scientist declare, "I regard botany as no science, but a mass of polysyllabic confusion."

Botanists have themselves to blame. They are fonder by far of airing their vagaries on paper to confuse, than of gardenesque beauty and simplicity to instruct. The best of their efforts whether at Kew, Peradenia, Melbourne (or New York?) are extravagantly impossible of assimilation by the average mind, and needlessly difficult for any mind. The student encounters a few thousand plants, heterogeneously assorted and arranged in all the mazes of whimsical confusion. It is impossible to extract comprehensive knowledge from the collections, they are less attainable than the alphabet of the Chinese, the keys are less understandable, because more variable, and often and often the arrangements have *no* keys.

It is possible of course that sinuous tracings were gotten off on paper for the guidance of professors



PRUNUS PENDULA. (Courtesy of Ellwanger & Barry).

in charge of such gardens, or they may have been "classical" plans. There is no great science in the road-making.

It is always easier to plan papers, than plant gardens, and until this is thoroughly recognized by public and professors alike, the tyro is sure to flourish, and he will often rush in with a blaze of trumpets,—to frighten the Angels foreby.

But the world progresses, (slowly), the Gardens of Babylon are dust, the tower of Babel is passed away, and the Babel of Botanical confusion may follow.

The ten tribes which have sometimes irregular but never, I believe bean like flowers or pods, begin

SPIRÆA ARUNCUS. (*Gardening*).

with *Chrysobolaneæ*, a tribe of 12 genera which are nearly all tropical. *Chrysobololanus* *Icaco*, and *C. oblongifolius* extend to the United States.

Prunus, is a large and familiar genus of 96 species, natives of Europe, sub-tropical and temperate Asia, and extending from temperate to tropical America. None seem to be truly African or Australian. Modern botanists sub-divide the genus into sections of which the Peach, the Apricot, the Plum, the cherry, the bird-cherry, and the cherry-laurels are typical. *P. Caroliniana* represents the latter, and it is a very handsome and popular evergreen in the states south of North Carolina, better adapted for standards than the "sweet bay," and excellent as a hedge plant. *P. lauro-cerasus*, var. *Caucasica*, has been tried under north walls and endured for a time in Maryland or even further northwards, but no variety of broad leaved laurel is to be relied upon where zero frosts occur. I have seen 40 year old plants cut to the ground in middle England. *P. ilicifolia* is the Pacific coast expression of the cherry-laurel, *P. lusitanica* extends from Western Europe to the Azores. Most all the varieties are charming evergreens for southern points, with racemes of whitish flowers much like the bird-cherries. The double flowering and other forms of the peach, plum and cherry are among the most charming objects in the gardens of the temperate regions, and nowhere are they finer than in the milder parts of the United States. Some varieties are short lived, but they are cheap, and should be replanted as often as they threaten to succumb. Upwards of 100 forms of the genus are in cultivation, encumbered by an endless synonymy.

Maddenia has 2 species from Himalayas and Thibet.

Nuttalia is a monotypic genus from the Pacific States.

Spirca is a large genus of at least 50 species and many varieties. They are European, Asiatic and American, herbaceous perennials, or shrubs, and in some few species at southern points sub-evergreen. *Japonica* in vars. *Lindleyana* and *Cantonensis* are among these.

Neillia is a closely allied genus of about a half dozen species from North America and the East Indies; *N. opulifolia* being often sold as a spirea.

Stephanandra has 3 species from China and Japan. *S. flexuosa* is in nurseries.

Exochorda is in 2 or 3 species from Northern China, Persia, etc. *E. grandiflora* is a well-known shrub, sometimes reaching to 20 feet in diameter by 10 or 12 feet high. *E. Alberti* is unknown to me but in European gardens.

Gillenia is an herbaceous genus in 2 species, both North American, *G. trifoliata* and varieties sometimes being called spireas.

Kerria has 1 or 2 species from China with double and variegated varieties. *K. Japonica* is a well-known shrub, but often neglected for newer but rarely better things; it flowers twice a year.

Rhodotypus also from E. Asia is monotypic; it is sometimes called a "white kerria," and will also sometimes flower twice.

Neviusia recently brought into nurseries is monotypic and a native of Alabama.

The species of the tribe *Quillajeæ* are chiefly

EUCRYPTIA PINNATIFOLIA. (*Gardeners' Chronicle*).

Central and South American, but *Vauquelinea Torreyi* extends north to the United States along the Mexican border. *Quillaja saponaria*; (not to be confounded with "Quillaia" of the Kew guides) and *Kageneckia crataegoides* have both stood on walls in the south of England. *Euchryphia pinnatifolia* is from Chili, (as are the two last); both it and *E. Billardieri* in its variety from Tasmania, stand in southern England without much shelter. They are evergreen trees and shrubs of some merit, and may possibly stand a living chance in parts of the Gulf states and southern California.

Rubus, "blackberries" "rasberries", etc., have maybe 100 good species, and anywhere in the neighborhood of 1,000 names; they have given botanists a great deal of trouble just to collect, examine, and mount them, write names for them, get them printed, and circulated. After all it is hard to find a thoroughly good garden plant among them. They are found from the frozen zones to the tropical mountains in most parts of the world, those from the mild climates being evergreen. A few are mere herbs. Among the showiest are *R. biflorus* with stems as if whitewashed, from the Himalayas; *R. odoratus*, *R. Nutkanus*, *R. spectabilis* and varieties, *R. thrysoideus* in some varieties, *R. deliciosus* and the dwarf *R. arcticus*. There are also double forms.

Cercocarpus in 5 species, and a few varieties are natives of the Rocky Mountain regions, California and Mexico. *C. ledifolius*, "mountain mahogany," is a low spreading evergreen tree frequent in Utah and Nevada. Occasionally it attains to thirty feet high, and should be of about the same hardihood as the shrubby *C. parvifolius* grown in southern England. This latter species extends further eastwards, however, and has been found at moderate altitudes in Colorado, and even on the Upper Mississippi, it is said; but it is not recorded by Gray.

Geum has 30 species in the temperate and cold regions, one having wandered to South Africa. They are herbs with bright flowers—scarlet, yellow and white in several shades. They have yielded several fine doubles, which together with some of the species are in gardens.

Fragaria, strawberries, have half a dozen or so of good species, and quite a number of new varieties every year, each one of which, is reckoned bigger, sweeter, redder, and at least 10 days earlier than anything before known! They are widely distributed over the northern hemisphere, and south to the mountains of the tropics. There are Alpine forms on the Mountains of India naturally fruiting in Dec.-Jan., and there they can take strawberry ice, a little ice with one hand, the fruit with the other. The yellow flowered, scarlet fruited, running kind, *F. Indica*, so freely naturalized from New Jersey

southwards is a good example of the facility with which certain East Indian plants adapt themselves to rigorous climates. It may not be known that the fruit makes a fair jam with sugar and plenty of lemon.

Potentilla has 160 species and names uncountable. They are mostly herbs, but occasionally frutescent, natives of most parts of the temperate and cold regions of the northern Hemisphere. They have scarlet, crimson, yellow, and white flowers; several are grown in gardens, and there is no doubt but they are capable of still further improvement. *P. fruticosa* and vars., has a wide distribution over three continents. Not very long ago a famous Landscape Architect sent to Wisconsin for a car-load or two of it to plant at Madison, N. J.!

Several genera of the tribe *Potericeæ* also include plants sometimes seen in botanic and nursery gardens.

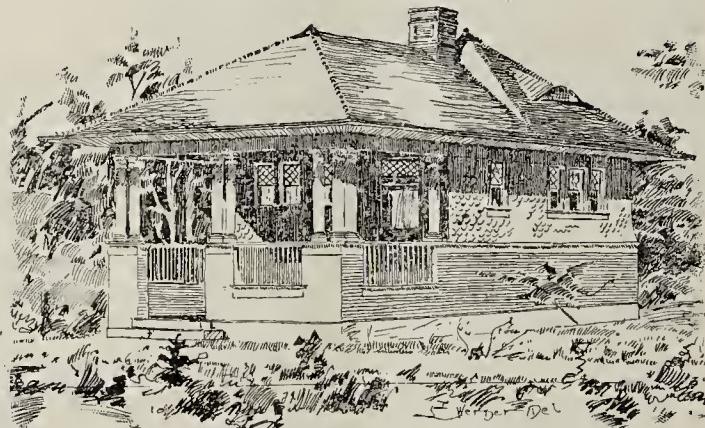
Trenton, N. J.

James MacPherson.

LADIES' LAVATORY, PROSPECT PARK, BROOKLYN.

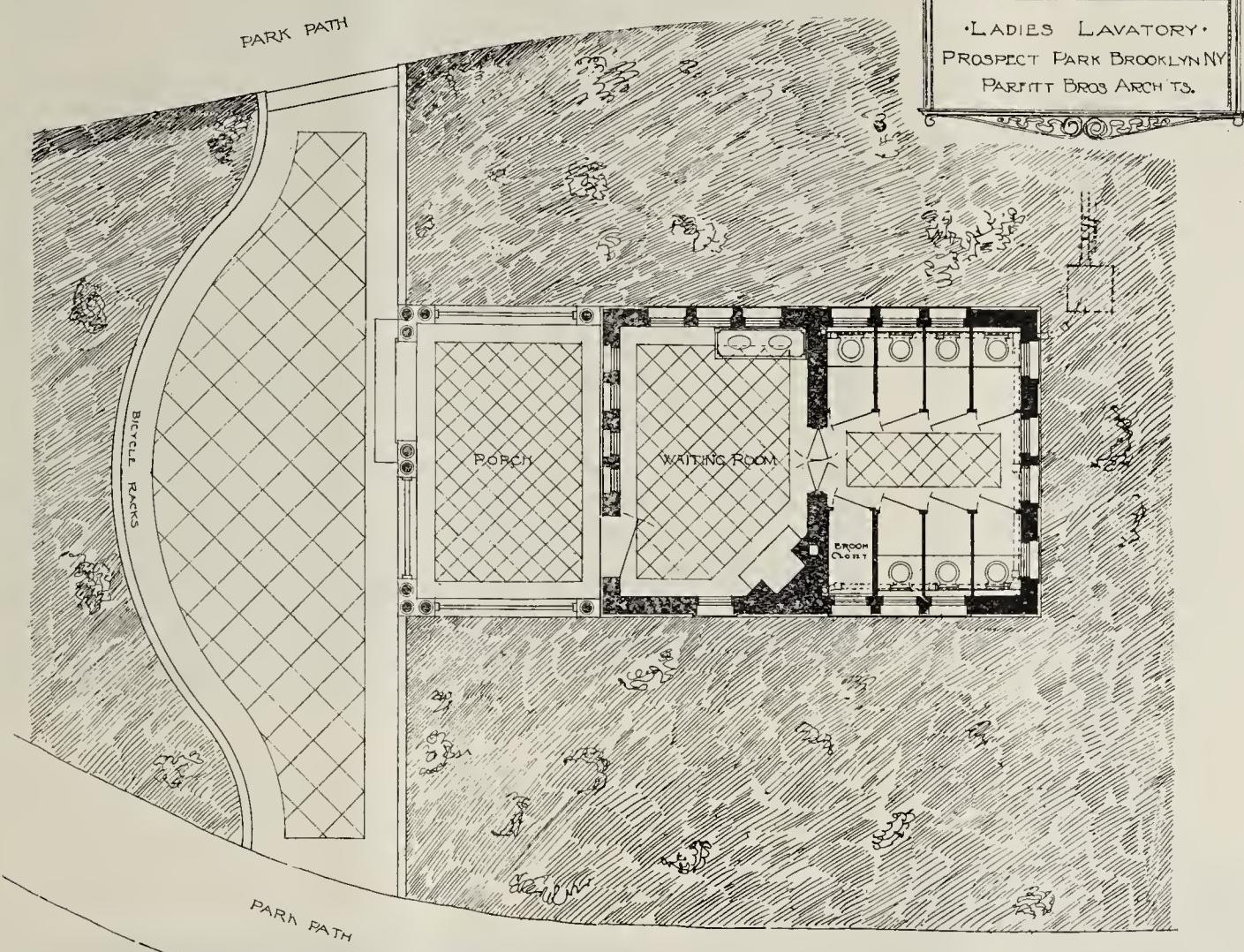
The accompanying elevation and plan represent the new Ladies' Lavatory erected in Prospect Park, Brooklyn, from designs of Messrs. Parfitt Bros., architects, Brooklyn, N. Y. It is an example of a substantial, handsomely finished park structure, designed on appropriate lines to fit the surroundings.

The foundation is of stone with Blue stone water table. The wall to tilt course, is built of 12 in. by 1½ in. amber color pressed brick laid in red mortar, and the sides, above brick wall are covered with 7 in. by 16 in. plain red Celadon Tiles, laid to show 6 in. to the weather. The trimmings to windows and eave moulding is of wood, painted light olive



in the two colors. The eaves are panelled. The roof is covered with fancy Conosera Celadon red roofing tiles, with heavy ridge and hip tiles,—all being especially designed for the purpose. The tiles give the building a very picturesque effect among the trees.

The plaza in front, as also the entire floor of the building, is covered with red and blue concrete in diamonds and squares.



On the inside to the height of the outside tiling course, the wall and fireplace in ante-room, is faced with similar brick as on the outside, while in the lavatory proper, the entire walls and partitions are wainscoted to the height of 6 ft. 6 in., with white Italian marble.

The doors to each division close only $\frac{2}{3}$ of opening, and are of cherry, polished. All the balance of the inside, including ceiling, is covered with yellow pine in panels.

Each water closet has its own tank, and independent supply. The vent from all extends into one of the flues in the chimney. All soil empties into a catch basin outside of the building, which in turn is connected to the city sewer. This was deemed necessary, so that any improper substance sent through the closet may be arrested and taken out, that the sewer may not be clogged. Handholes are provided for cleaning out and swabbing the entire system.

The color scheme of the exterior is very pleasing, all trimmings being in two colors of olive, a dark and light above the amber brick, and mingling with the red tiles.

The structure complete cost \$3,650. .

BULBS FOR THE CEMETERY.

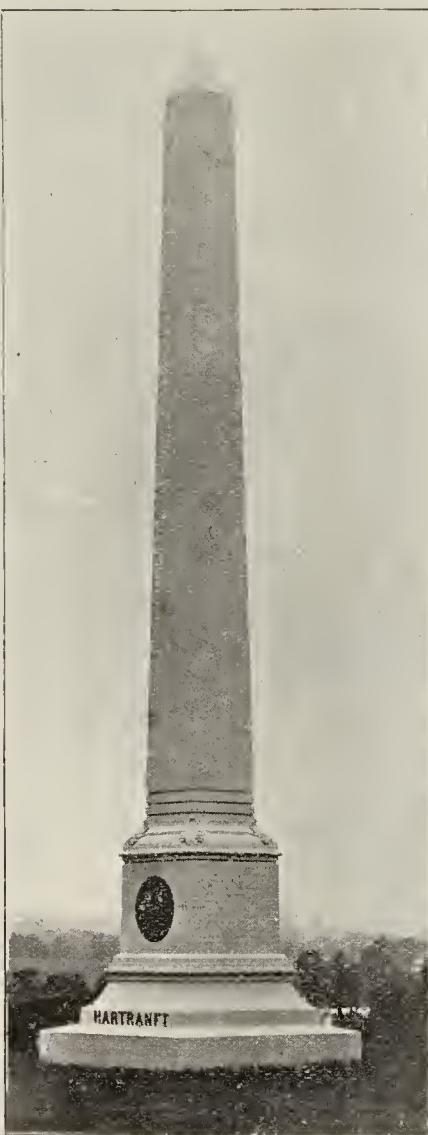
In many of the rural cemeteries, where the care of lots rests wholly or in part upon their respective owners, the selection of suitable floral decorations is frequently found difficult. Were beauty, simplicity and harmony the only qualities to be considered, there might be comparatively little hesitation. But the special requirements of the different species must be regarded, and too often this side of the question is complicated by the residence of the lot owner being too remote to insure regular or frequent visitation, hence restricting the available list to such plants as require little care.

Few possess this quality in a more marked degree than the hardy spring flowering bulbs. Planted with care in early autumn that they may become firmly rooted before winter they may be confidently trusted to take care of themselves. They are even planted successfully as late as December, providing the ground remains unfrozen, but it is wiser not to defer planting later than October.

True, they are not protracted bloomers; neither are the lilies, but what is a more general favorite? By exercising a little discretion in selecting, how-

ever, an uninterrupted succession may be obtained from the time the snow drifts retreat till the month of roses is at hand.

First come the snowdrops and crocuses, often peeping up in the midst of snow and ice. Of the former one can scarcely have too many, their modestly drooping heads at once suggestive of purity and peace. The crocuses, though more showy, are not gaudy. White ones are especially adapted to this situation; the variety Biflora — white, delicately penciled with dark near base of perianth—is also pleasing; some of the



MONUMENT TO GEN HARTRANFT.

lavenders and purples are exquisitely marked and rich without being gay, and all colors blend well together. The Mammoth Yellow is the earliest, as well as the most profuse bloomer, its golden blossoms making a charming combination with the white varieties.

For those desiring the blues there are the Chionodoxas and the Scillas, with colors so intense and so peculiarly their own as to render them most effective when grown in masses remote from other flowers.

All of the above die down at the approach of the first warm days, hence offer no obstruction to the lawn mower.

Then come the hyacinths, wafting sweet odors from their delicately tinted bells. Some of the tulips, which follow in their wake, have a soft, subdued coloring which renders them pleasing for cemetery decoration; the single varieties are greatly to be preferred, possessing an elegance and grace lost by their more elaborately

equipped sisters. Silver Standard, carmine flaked with white, and J. Van Delf, white with lemon eye and anthers, are among the best.

Ornithogalum umbellatum, commonly known as Star of Bethlehem, is admirably adapted to cemetery planting, either in conventional designs or as a border plant. And if Memorial Day is sunny it rarely fails to observe the occasion by unfolding its snowy, star-like petals. This plant, too, soon dies down, and even if its leaf blades are clipped a few times before the bulbs fully ripen the plant is not affronted by this rude approach of the lawn mower, while the remnants of its grass-like leaves are not so conspicuous as to disfigure the lawn surface.

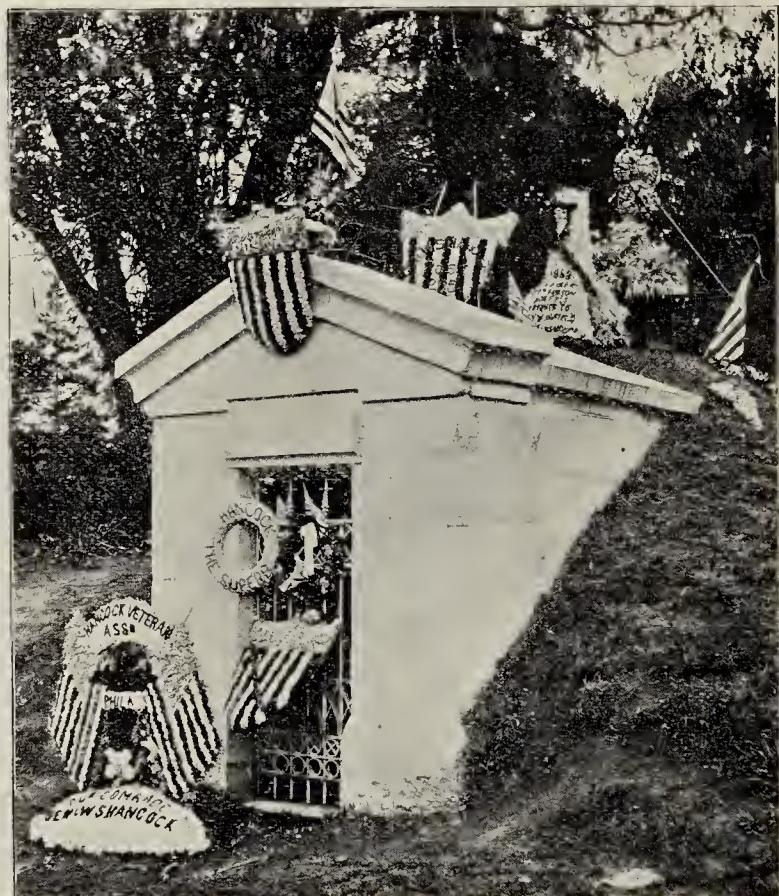
The bulbs of the hyacinth and tulip are a little slow in maturing, hence the large leaves would become unsightly as they turn yellow. These should be planted in pots, which can be removed when the season of bloom is over.

Bessie L. Putnam.

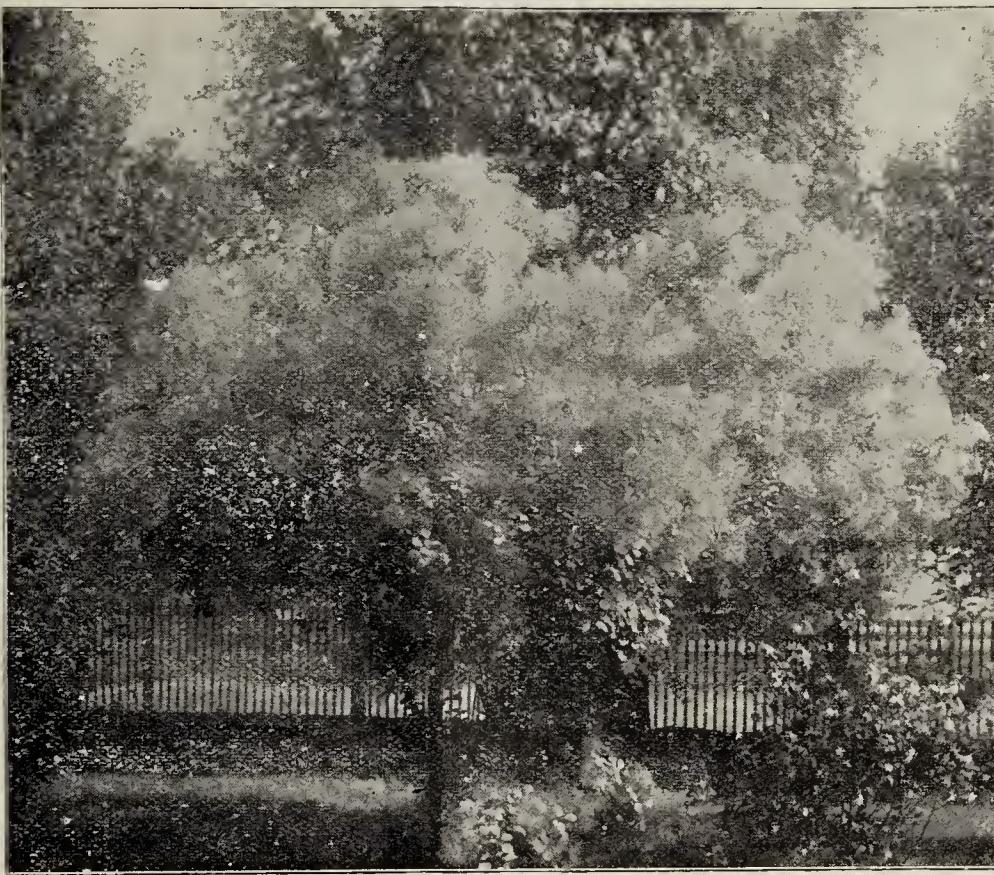
BURIAL PLACE OF TWO AMERICAN GENERALS.

In one corner of Montgomery Cemetery, Norristown, Pa., is the tomb of the late General Winfield S. Hancock. In another portion of the cemetery, overlooking the Schuylkill River, is buried the late General John F. Hartranft.

The tomb of General Hancock is of poorly constructed sandstone which is fast falling into decay.



GEN. WINFIELD S. HANCOCK TOMB.



RHUS COTINUS.

There has been some newspaper agitation about improving the tomb, but it has so far ended there. The tomb which was erected by General Hancock himself stands within two hundred yards of the old home where he spent his boyhood days. I am told that was the sole reason for the General choosing the site for his last resting place. It is a deplorable fact that while memorials of great expense and artistic design have been erected in different parts of the country to General Hancock, no decisive steps have been taken to improve his last resting place. In striking contrast to the Hancock tomb is the plot in which General Hartranft is buried. A magnificent shaft has been erected to his memory by the National Guard of Pennsylvania.

The monument itself is of Westerly granite. In bas-relief upon the front of the die is a bronze medallion of the General in profile.

To the left and right of the medallion cut in the granite are the dates 1830—1889.

On the right hand side of the die the following record is cut:

Norris City Rifles	- - - - -	1857.
Lieut. Colonel 1st. Bat. 2nd. Div. Pa. Militia,	- - - - -	1858.
Colonel 1st. Bat. 2nd. Div. Pa. Militia,	- - - - -	1859.
Colonel 4th. Reg. Infantry Pa. Vols.,	- - - - -	1861.
Colonel 5 th . Reg. Infantry Pa. Vols.,	- - - - -	1861.
Brigadier General, U. S. Vols.,	- - - - -	1864.
Brevet Major General, U. S. Vols.,	- - - - -	1865.
Colonel 34 U. S. Infantry,	- - - - -	1865.
Major General 2nd. Div. Pa. Militia,	- - - - -	1870.
Commander in Chief, Natl. Guard of Pa.,	- - - - -	1873-1879.

Major General National
Guard of Pa., - - - 1879-1889
Commander in Chief, G.

A. R., - - - 1875-1877

The rear of the monument has a keystone cut in the centre of the die; while above and below it reads "Major General John F. Hartranft, Erected by the National Guard of Pennsylvania."

The accompanying illustration of the Hancock tomb was taken on Decoration Day of 1894.

Bellett Lawson, Jr.

COMMON SHRUBS.

Many, even most, of the shrubs usually classed as common are uncommonly attractive when well grown and well placed.

The accompanying illustrations of *Philadelphus coronaria*, popularly known as Sweet-scented Syringa, and of *Rhus cotinus*, or Purple Fringe tree,

show two old favorites in a most charming guise, which, however, does them no more than justice, for they are as delightful as they are useful.



PHILADELPHUS CORONARIA.

The fragrant white flowers of the Syringa are well known and are produced in profusion every year, even by neglected plants. The same is true of the fluffy plumes of the Smoke tree, which retain their beauty for weeks. The contrast between the numerous bright red branchlets of each plume and the feathery mass they support, together with the neat, bright green foliage, forms a combination that should make it welcome in park, cemetery and lawn planting, while its adaptability for use with cut flowers gives it additional value to individuals.

F. C. S.

A DRINKING FOUNTAIN, CHELSEA, MASS.

Winnisimmet Square, Chelsea, Mass., is to undergo improvements this season, to the amount of some \$10,000. Two years ago a large fountain was erected from funds of the Stebbins bequest, and this structure only made apparent the necessity for a more developed improvement of the large triangular space about it, created by the angles of the several entering thoroughfares.

The main improvement now includes the mak-



ing of park-like enclosures, one on either side of the main fountain, to be devoted to flowering plants and shrubs, while the so-called square is to be also embellished by four Venetian masts 40 feet high, permanently set in ornamental bases, and carrying rings of electric lights by night and banners or flags by day.

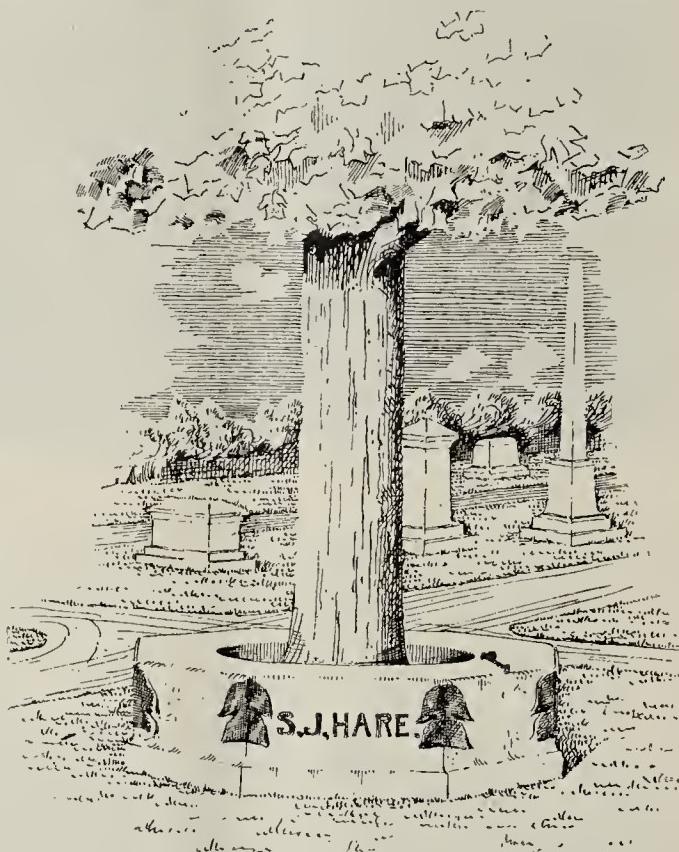
In the extreme end of one of the parks, the drinking fountain illustrated herewith will be set. The basin and columns will be of granite, the columns supporting wrought iron scrolls

carrying a lantern containing electric lights.

The improvements when completed will set off to great advantage the surrounding buildings and tend to make Winnisimmet Square an attractive feature of Chelsea. Messrs. Walker & Kimball, architects, are the designers of the improvements.

NEW FORM OF MEMORIAL MONUMENT.

Knowing the inclination of PARK AND CEMETERY toward beauty of landscape rather than piles of granite and marble, I have desired to make a



monument for my own lot that to some extent would not have the appearance of a monument, yet mark the spot where those dear to me lie, and be also of use to those who visit the spot in the future.

The accompanying illustration displays the idea which, as will be readily understood, is capable of many modifications as to detail.

Our parks are supplied with rustic seats or benches that must be moved when the lawn is mown, otherwise an extra amount of labor is expended in cutting the grass beneath them.

In the modern cemetery rules we find the iron or wire seats ruled out, hence we have a beautiful lawn with inviting shade, but no place to rest, unless we take a seat upon the sod, which may be wet perhaps with the morning dew, or from a recent shower.

Many visitors who come to the cemetery desire to linger and pass an hour or more near the spot made sacred to them personally, and the sense of appreciation of those moments is greatly enhanced

when the beauties of landscape impress them and the birds warble their joyous sympathy from the spreading branches of the shade trees. And should such a shade tree have been planted by a beloved one gone before, how delightful to enjoy some moments of contemplation seated beneath its whispering foliage. It is to this end the idea of a permanent memorial seat, such as is shown, lends its elf.

The monument will be the living tree, and the memorial seat its complement.

How often I think of the character of Leather Stocking, and repeat the words of the poet describing his last resting place:

I kneel beside a grass-grown grave, marked by a mossy stone,
Which bears the name so time bedimmed I scarce the words may
trace;

And just beneath, let not rude hand disturb this burial place.

Like this lover of nature I would wish to be buried beneath the spreading branches of a tree, my choice being the Tulip tree or Liriodendron tulipifera, known in my native state, Kentucky, as Kentucky poplar, or yellow poplar.

I have resolved to adopt this for my monument, the reststone to bear on its corners a carved leaf of this beautiful tree, and each headstone a similar leaf carved on the corner, with a scroll unrolled over the top of the stone for the inscription.

The marker is 8 in. high by 14 in. by 20 in. The monument shown is 5 feet over the top by 16 in. high, to be cut from Barre granite. It will set on four masonry columns, or foundations, coming to the surface of the sod.

Before deciding upon dimensions of the "Rest" monument very careful consideration must be given to the requirements of the tree for all future time.

Historic trees could be usefully marked in this way for the future, and on the ring could be placed the historic facts connected with it.

Landscape gardeners in charge may offer objections to the Rest monument, fearing it will become monotonous, and that trees will be planted where some beautiful vista might be spoiled. This might be true if all resolved on a ring tree monument, but tastes differ. The Rest monument would add only one to the list of variety in design, and as the rules of the best cemeteries require a plan to be submitted before foundations are built, there is no fear but that the beauty of the landscape will be maintained.

*Sid. J. Hare, Superintendent,
Forest Hill Cemetery, Kansas City, Mo.*

WATER LILIES.

The universal admiration of water lilies is spreading so rapidly that many who have never before grown them contemplate planting a few this season, and are just now seeking all the information they

can get as regards varieties to plant, culture, etc. To such I beg to submit a few unbiased suggestions drawn from my own experience.

There is no other class of plants under cultivation that affords a greater diversity of color, richness of fragrance and profusion of bloom, and I do not believe there is any other more interesting and attractive. A lily pond, or even a tub or tank, seems to enchant the visitor, and fixes an impression on his memory that is never removed. Oftentimes our proudest and costliest flowers and show beds must suffer disappointment at being passed by unnoticed, but a lily pond catches the eye of every one. Even passing strangers and those who never see flowers ordinarily will stop to admire a Lily Pond.

Then they occupy a place where no other plants can be grown. Think of clothing our naked lakes, ponds and streams with such fair raiment and converting our sickly swamps and ugly mud-holes into veritable Edens! No other flowers will give us such returns for the amount of labor and expense invested. The management of both hardy and tender sorts is quite simple and more of a pleasure than a burden. In fact, they do not require cultivation in the sense other flowers do. Plant and the work is done. No hoeing, weeding or watering is necessary. Once started in the proper environments and no further attention is necessary.

In natural waters, as ponds, lakes, streams, etc., places for planting should be selected where there is not too much rock or sand, as water lilies are strong feeders, liking plenty of rich soil and sunshine. They start off best in shallow water, say two feet deep, for the larger growing sorts. To plant the roots remove the soil to a depth of two to four inches; then lay them in horizontally—not set upon the ends—and cover gently with mud. Care should be taken not to bruise or break the roots in handling. If there are fish in the water some rocks, slabs, or better still, poultry netting should be placed over the roots to protect them until they are well started. Most natural ponds at planting time are abnormally high, and if the lilies are planted near the edge as dry weather approaches the water goes down, leaving the little plants on the bank to be injured by the sun. To avoid this I have found it an excellent plan to plant the lilies in boxes, say two feet square and eight inches deep, so that they may be dragged into the shallow water at high and low tide, until the plants have become established, when they will care for themselves in drouth and flood.

Within a few days after planting the little leaves will be seen afloat on the water. These are soon followed by larger ones, and then the beautiful



LILY POND IN PINE GROVE CEMETERY, LYNN, MASS.

"lily pads," which will last in profusion till frost. The best time to plant in open ponds is in the spring, soon as the water gets warm. Of the hardy lilies for general planting we would suggest *Nymphaea Odorata* and *N. Marliacea Rosea* as the best pinks, *N. Odorata Sulphurea* and *N. Marliacea Chromatella* the best yellows and *N. Superba* and *N. Alba Candidissima* the best whites. With the Lotuses, *N. Speciosum* (pink), *N. Album Grandiflorum* (white) and *N. Luteum* (yellow) are the best. Of course to these may be added an endless number of varieties, but these we regard as the "must haves."

Growing water lilies in tubs is attended with a great deal of satisfaction to those not having natural tanks or tanks. Oil barrels sawed in two make cheap tubs. They should be filled two-thirds with soil, in which the lilies are planted, and kept full of water. In summer give plenty of sun, and in the winter protect from freezing. Culture all the smaller growing hardy and tenderies, together with the Egyptian and and all the tender aquatic plants, ad.

of tanks is becoming more. For a permanent job they ep, walled with brick, the

bottoms made of concrete and the whole cemented. If the soil is of a firm texture a good heavy coat of cement without the brick will suffice. The size is governed by the kind and amount of plants it is intended for. The larger growing tender varieties should have a water surface of twenty to thirty feet diameter. To insure complete success with the tropical varieties the tank should be heated by steam or hot water pipes in the spring and early summer. It will be found necessary to run in fresh water occasionally to prevent stagnation. A lot of gold and other ornamental fish will add greatly to the beauty of the tank and be useful in destroying insects, larvae of snails, etc., that infest the plants and prevent mosquitos from breeding on the water.

All kinds of water lilies and aquatic plants do well in a well kept tank. *Geo. B. Moulder.*

Smiths Grove, Ky., March 1, 1897.

* * *

The above picture serves to illustrate the foregoing article and to show further what effects can be produced by judiciously disposing other plants and decorative grasses about the pond. The planting in the illustration is the work of Mr. William Stone, superintendent of Pine Grove Cemetery, Lynn, Mass., who has been very successful in thus beautifying the cemetery under his charge.

* PARK NOTES. *

The bill declaring the Potomac Flats, Washington, D. C., a public park has passed.

The last New York legislature appropriated \$1,000,000 for improvements and additions to the Metropolitan Museum of Art, Central Park, New York.

A public spirited citizen and tree lover of Indianapolis, Ind., Park Commissioner, Albert Lieber, recently donated 700 trees to the Catholic societies of that city with which to plant a new street.

The City Council of Evanston, Ill., has accepted the gift of 100 bird houses from one of its citizens, conditionally upon their being placed in the parks. The bird boxes will be one foot square and each will have two compartments.

The Improvement Committee of the Board of Park Commissioners of Minneapolis, Minn., has recommended that the statue of Ole Bull, the gift of the Ole Bull Monument Association be placed in Loring Park. This is the first work of art to adorn the Minneapolis park system.

If the current planting season is a good one some 50,000 trees and shrubs will have been set out in Schenley Park, Pittsbnrgh, Pa., by spring. It is the intention of greatly increasing the nurseries of this park and to add the propagation of many varieties of trees and shrubs not now common.

The residents of Orange and East Orange, N. J., have placed \$15,000 in the hands of the treasurer of the Essex County Park Commission to be used in the purchase of land and the construction of a triangular park. The tract is about fifteen acres in extent, and is situated in the three municipalities of South Orange, Orange, and East Orange.

The "red rain" which fell in Melbourne, Australia, and its neighborhood seems to have performed one useful operation. The government horticultural expert reports that the red shower acted exactly as hellebore in cleansing the pear trees from the prevalent slug. He says that the trees were completely cleaned, and that the insects died instantly.

Indianapolis, Ind., has met with success in the disposal of park bonds, having disposed of the entire issue of \$350,000 for \$376,347.50, or at a premium of a little over 7½ per cent. The Indiana Trust Co., was the purchaser. As soon as the bonds are ready the money will be available, and active steps will immediately be taken to secure the proposed tracts of land and it is expected that the Board of Park Commissioners will acquire and improve as much land as possible this summer. The bonds are to run thirty years, with interest at rate of 4 per cent.

Many railroad corporations are realizing the value of improving their depot yards and other points on their lines of road, where a few flower beds or groups of shrubbery, lend a charm to surroundings otherwise very unattractive. The Chicago & Northwestern Ry., among others, is extending its work in this direction and keeps a gang of men with a superintendent constantly moving, setting out and caring for the little depot parks, beds and patches at numbers of points along the line. At some points quite elaborate displays are arranged and cultivated. It is worthy of note that depredation is of very rare occurrence, and

is a striking indication of the public appreciation of the efforts of the railway companies.

A magnificent project of improvement in connection with the Puget Sound University and the city of Tacoma is in progress. The scheme as a whole is to create a parkway between Tacoma and the University grounds, a distance of some 5½ miles, to be continued to the shore of the bay a further mile and a half. In connection with this is the creation of suburban property on the route. The landscape work is to be of a high order to enhance the beauties of the natural scenery, and the improvement would mean an increased and permanent interest in Tacoma and its environs, as well as the fast growing University. Mr. E. O. Schwaegerl, landscape gardener of the University grounds, has been engaged on the plans for some time past.

The Minneapolis, Minn., Park Commissioners' report for 1896 shows total receipts, including a balance from previous year of \$2,585.52, to be \$255,409.53, and expenditures \$255.025.82. The receipts included an assessment for tree planting in the streets, of \$3,843.30. President Folwell in his report makes a number of suggestions worthy of more general consideration. Among them are: 1. To provide legislation for establishing a building line on parkways, requiring abutters to keep their buildings at a specified distance in rear of the property line. 2. The assumption by the city authorities proper of the interest on the park debt as it accrues—thus liberating a considerable portion of park funds for maintenance, improvement and enlargement. 3. The nursery ought to be enlarged, and enriched. Economy, convenience and taste unite in approving of such a policy.

Including a balance of \$811.98 carried over from the previous year, the report of the Board of Park Commissioners of Duluth, Minn., for their last year, shows total receipts \$38,881.46 and expenditures \$38,097.02. Among the receipts is an item of \$1,507.85 obtained for assessments for tree planting. This work has been carried out in a systematic manner for the past three years. Of the forest class of trees some 5,000 have been planted along the city streets, on the general plan of one tree to every twenty-five feet of frontage. Assessments are levied by the Board of Public Works on the basis of \$2.00 to \$2.50 per tree according to size, set along any given street, which prices carried the Board's guarantee for the replacing of all trees failing to grow, and for their maintenance otherwise for an agreed term of three years, but "which in practice, no doubt, will prove to be perpetual." As far as can be computed this is about one half the cost of the trees at the end of the three years.

Dr. Hartwell in the course of a lecture on "Playgrounds and Athletic Grounds in Public Parks," before the Boston Physical Education Society, gave some interesting data on the subject from European cities. He said that in many of the European cities the physical education is part of the regular school course, and the children are obliged to visit the playgrounds with their teachers. In London the city provides playgrounds in the park systems of all sorts of games, including tennis, golf, foot ball, cricket and various other kinds of outdoor sport. With all our parks here in Boston we only have one real playground in the city proper, that being at the Charlesbank. There are two other playgrounds, one at Wood Island Park and the other at Franklin Park. While in London they have more area devoted to playgrounds, we excel them in appointments and gymnastic apparatus. He suggested the idea of using old cemeteries for playgrounds as has been done in England, and it would be a very easy matter to do it in Boston. In London many of the old cemeteries have been turned into excellent playgrounds.

 + ~ ~ ~ CEMETERY NOTES. ~ ~ ~ +

The following strange request was contained in the will of the late Mary A. Leamy of Philadelphia, says the *Philadelphia Record*: "I direct that I shall be laid out in a covered casket, provided with a mattress; that the casket shall be inclosed in a chestnut box, and that my body shall be interred in a grave alongside of my husband. The grave shall be eight feet deep, with brick sides laid in cement and mortar, having a brick bottom. The brickwork to be whitewashed, and grave to be covered with slabs of stone. The inclosure rail shall be extended over the entrance to the lot. I desire that my late husband's Masonic mark shall be hung around my neck and interred with me."

* * . *

The committee of the Ministerial Association of York, Pa., recently read a report on the subject of Sunday Funerals, in which it was stated that they should be avoided whenever possible, as pastors are necessarily engaged with their other duties; that Sunday funerals afford opportunity for public street parade, gathers crowds of aimless curiosity seekers and disturbs Sunday school or other services from their solemnity; that Sunday funerals require the services and attention of many persons who are thereby deprived of rest and opportunity to worship on the Lord's day; and urges the church members to make no arrangements for funerals on that day, except in cases of extreme necessity. A committee of the Ministers' Association of Lynchburg, Va., in its report on this subject said: "There should be desirable changes in the length of funeral services that will not only preserve all due respect for the dead, but greatly relieve the strain on the relatives and friends, as well as the danger from exposure incident to funerals in bad weather. Especially do we hope to see this applied to the service at the grave. Not only do we think the minister should have regard to the comfort and safety of the people in the length of the service he may conduct, but prudence requires that the custom of standing around the grave in bleak weather, gentlemen with uncovered heads, till the grave is filled and the flowers are placed, should be discouraged, if not altogether abandoned. * * * Expensive flowers, crepe and equipage might, for the sake of living humanity, give place to less costly, but not less affectionate, tribute to the dead. We recommend that the family be expected to employ only carriages sufficient for themselves and for the bearers."

* * . *

The Board of Managers of Public Burial Places of Quincy, Mass., in their report for 1896 state that the cemeteries have never looked so well as this year, and due credit is given the superintendent. The report asserts that the "lawn system" has greatly improved parts of Mount Wollaston Cemetery, and that this plan will be further carried out. On the question of the employment of labor the Board says: The employment of help in this department is placed entirely in the hands of the superintendent, and he employs only such men as are desirous and anxious to work. The appropriation is small, and the duty is to secure the most that can be had for the money. "Being a public burial place, no discrimination can be made in hiring labor, and the rule has been to keep during the whole season those men who show a willingness to render to the city full value for the wages they receive. Neither race, creed or politics enter into the employment of the men. The one requirement is that they shall be citizens and residents of Quincy." White stakes in single grave lots are being done away with and are being replaced by terra cotta markers. The Board suggests the construction of a chapel, a superintendent's residence at the cemetery and suitable green houses. During the year there were 192 burials and 5

removals in the public cemeteries. The Perpetual Care Fund of Burial Places now amounts to \$9,075.

* * *

The total number of interments in Wyuka Cemetery, Lincoln, Neb., up to January 1, 1895, amounted to 5,147. During 1895 there were 351 burials and 294 in 1896, making a total up to December 31, 1896, of 5,792. The rules of the cemetery prohibit: Interference with or injury to flowers, shrubs or trees under penalty of arrest; the hitching of horses to trees or fences, or left untended; the admission of dogs under penalty of destruction by employes; fast driving, or driving anywhere except on regular thoroughfares; lunches on the grounds, and the littering of the grounds by refuse flower boxes or wrappers. All foundations for monuments are constructed by Cemetery Association. No interments are made from the Receiving Vault on Sunday.

* * *

Clinton, Mass., is about to witness a series of funerals liable to occupy the entire year. This is caused by a decision of the Massachusetts State Metropolitan Water Commission condemning the old cemetery of St. John's parish, and requiring the removal of its occupants. The new site is three miles north of the old cemetery, and the route to it lies through the heart of Clinton. Five thousand bodies will have to be removed, together with numbers of monuments and headstones, and very many of the transfers will partake of the nature of regular funerals, with mourners and other details. A novelty in funeral customs in this wholesale exhumation will be that many of the bodies will be carried again to the grave accompanied by friends, and also by the headstone or marker. The work has been undertaken by contract at a cost of \$20,000.

* * *

The Cemetery Board of New Bedford, Mass., at a recent meeting voted to purchase two of the private tombs in the Rural Cemetery, with a view ultimately of purchasing the entire row of private vaults in order to improve the appearance of the cemetery.

* * *

The report of Fairmount Cemetery Association, Newark, N. J., to March 1, 1897, gives the total receipts for the past year, \$61,610.22. This includes balance from previous year of \$28,070.29; from sale of lots and graves, \$22,678; from receiving tomb, \$477. The expenditures include: Salaries, \$5,200; labor, etc., \$14,045.56. The balance carried over is, \$37,079.57. The superintendent's report shows a very large amount of improvement carried out and new sections prepared, some 350 lots being made ready for sale. The work of laying the foundations for the Krueger mausoleum, which will be one of the finest structures of the kind in the State, was begun in the Fall. There are 1,847 lots under perpetual care; 42 granite monuments were erected, and 55 granite headstones set. The interments for the year were 1,154, making a grand total in cemetery to December 30, 1896, of 31,445. There were 76 lots sold in 1896, making a total of sales to January 31, 1897, of 3,154 lots. There were three iron railings removed and twenty hedges.

* * *

The report of the Board of Trustees of The Greenwood Cemetery, Brooklyn, N. Y., for 1896, shows that the general fund for the Improvement and Permanent Care of the cemetery was increased during the year by \$72,000, making the total fund at present \$1,920,833.77. The Trust Fund deposits for the special and permanent care of lots now amounts to \$467,411.45, an increase for the year of \$30,236.65. Sales of lots realized \$121,599.89; single graves \$14,802; receiving tomb \$95.32; opening graves and vaults \$34,083.50. Among the disbursements there was expended for labor \$138,627.99; improvements \$18,489.40; and maintenance \$21,308.98. The total securities held by the cemetery Dec. 31st, 1896 amounted to \$2,266,065. The

cemetery employed a monthly average of 257 men and over 23 horses. A system of private telephonic communication has been established from several points of the ground. Upwards of 900 trees were set out upon the newer avenues. Two hundred and fifty dilapidated lot enclosures were removed.

* * *

The Executive Committee of the Association of American Superintendents has decided that the Eleventh Annual Convention to be held in Cincinnati, O., be set for September 14, 15, 16, and 17. A longer programme has been considered necessary, as one day probably September 16, will be spent in Dayton, O., visiting the cemeteries and the Soldiers' Home. It is expected that satisfactory railroad rates will be made for the occasion.

Correspondence.

A PLEA FOR "LANDSCAPE ARCHITECT."—STREET TREE PLANTING.

MINNEAPOLIS, MINN., April 5th, 1897.

Editor of Park and Cemetery.

SIR:—In your last issue I find several points of interest, but from which I must beg to differ in a degree. Both editorially and by two of the contributors the question of the proper title of the profession, the interests of which your publication so faithfully serves, is brought up, and with unanimity the verdict is rendered in favor of Landscape Gardening.

Now, although by so doing I may be laying myself open to the charge of "lack of power" which Prof. Bailey seems to make, I will venture to suggest that there may be something said on the other side, and in favor of the title Landscape Architecture; for the introduction of any new word or phrase into a language is generally based upon some actual need.

I would first hint that the argument of the sentence from which I have just quoted seems to be one which might apply on either side of the question.

To be sure the recommendation of age goes with the word Gardener, but from a mere standpoint of business the change in phraseology has become necessary, for almost every village of size has one or more parties in it who advertise themselves as "Landscape Gardeners"; they are in reality florists who with cannas, caladiums, etc., will decorate the lawns of their patrons with foliage beds, or are even only a higher grade of laborers, who, possessed with some natural talent, can shape a lawn or set out a group of shrubs in a workmanlike manner.

The great majority of these, however are entirely unable to prepare a plan, or even understand one without much explanation. The necessity of distinguishing the artist and designer from this class of practitioners has led to the new term.

The argument that the word architect can apply only to one who deals entirely with artificial structures and works in lifeless objects, fails when we consider that language is a growth and evolution. If we can trust our lexicons the word as first used by the ancient Greeks signified "chief carpenter," but we surely would not demand that the designers of the beautiful "White City" coin some phrase which should designate them as "chief blacksmiths" or "chief plasterers" because the buildings were constructed mostly of steel and staff. On the contrary the word as now commonly used is freely applied to any one, who in any direction follows out a scheme showing originality and design; and the meaning is perfectly clear when we speak of a man as "the architect of his own fortune," or refer to the "Great Architect of the Universe."

As the architect of a building must be much more than an

expert carpenter or mason, so must a landscape architect be much more than a gardener, and if the writer is not mistaken most of those who in this country or abroad have become famous as leaders in the art have entered it, not so much from the gardening as from the architectural or artistic side. Even the taint of engineering knowledge which it is too much the fashion of some to sneer at, is not entirely to be despised, and a little of it on some occasions, at least, would have led to more practical suggestions on the part of designers.

It can safely be said, I think, that the term "landscape architect" has come to stay, and that time will show that its originators were not in error, when they coined it.

The second point to which I would refer is the notice of park work being accomplished in the city of Rochester, N. Y., especially in connection with the planting of street trees. One of the sections in the law organizing the Board of Park Commissioners in this city deals with this duty and they are authorized at their discretion to plant such trees and maintain them for three years, assessing the estimated cost of the same against the abutting property. In accordance with this, during the past eight years, several thousand trees have been set out, along about eighteen miles of street, and it is safe to say that no single achievement of the Board has given such general satisfaction as this.

The work has been done in various sections of the city as petitioned for by the interested property owners.

The cost has so far been estimated at five dollars per tree, though this has proven to be a little less than the average expenditure incurred.

Elms have been used exclusively as they seem to thrive the best, under all circumstances; smooth barked trees, as the maple and linden suffering much in this climate from "sunscald." The trees are set about forty feet apart, but on account of existing trees and improvements, such as catch-basins, water-connections, drives, etc., no strict rule can be adhered to. Nursery grown trees from two to three inches in diameter are used; the holes are dug six feet in diameter and four feet deep, and filled with black loam, as soon as planted a painted wooden-slat guard is placed around the tree, it is mulched and a regular system of watering is begun to be continued during the three years required by law. Although the very dry summers recently experienced have been severe on new plantings, the percentage of losses has been very gratifyingly small. All such losses are made good at the next planting season.

A little thought will make it plain that a system of special assessments for this purpose which shall be always perfectly equitable, to all concerned is not easy to devise; but so far the method of assessing the amount against the lot directly in front of which the tree stands, has been followed, with very little objection.

Of course all experiences in connection with tree planting are not "rose-colored" and "kicks" are not entirely lacking. Some commercial tree planters would convince lot owners that the city price is too high, and that the trees are too far apart to do any good. That the latter argument is sometimes listened to is proven by the fact that last season I found five fine three inch elms set in front of one forty-foot lot.

From our experience I should not hesitate to advise any Park Board to adopt this method of street improvement, while at the same time due caution should be taken to adapt it to local requirements and the financial conditions of the treasury.

With us the Park Board have the oversight of all street trees, and an experienced man with several assistants is engaged during the proper seasons in pruning and caring for the same. No tree can be removed without a special permit, and pains are also taken to enforce the law against hitching horses to trees or near enough to damage them.

Frank H. Nutter,
Landscape Architect.

PARK AND CEMETERY.

Association of American Cemetery Superintendents.

G. W. CREESEY, "Harmony Grove," Salem, Mass., President.
ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., Vice-President.
F. EURICH, Woodlawn, Toledo, O., Secretary and Treasurer.

The Eleventh Annual Convention will be held at Cincinnati, O., Sept. 14, 15, 16 and 17.

Publishers' Department

Park Commissioners and Cemetery trustees are requested to send us copies of their reports.

Photographs and descriptive sketches of interesting features in parks and cemeteries are solicited from our readers.

Obituary:

CHARLES ELIOT.

A noble character, allied to a noble profession, was called to a higher resting place when Charles Eliot, son of President Eliot of Harvard University, and member of the firm of Olmsted, Olmsted & Eliot, landscape architects, died at his home in Brookline, Boston, on March 25th, in the thirty-eighth year of his age. Called away far too soon according to our human intelligence, he, however, left a record in work accomplished and work begun, which stamp him as a remarkable man, and assure him an enduring memorial not only in the hearts and minds of those who knew him, but to posterity hereafter. A highly educated man, and of intellectual refinement such as an intimate knowledge of nature and sympathy with her methods surely impart, he was, while unobtrusive to a degree, persistently active in undertakings to promote the development of the work which was his special life object to encourage, knowing full well its measure of value to his fellow man. It should not be for us to waste energy in deplored his loss, but to study the life lesson he has left, and exercise ourselves in aiding the work he so brilliantly opened out for us. Besides so much of private practice, he was the most active promoter of the scheme for preserving the beauty spots of Massachusetts, a work of such appeal to public sentiment, that several states are now following in the train. He also took the lead in organizing the Metropolitan Park Board, of which he was made the landscape architect, and his plans for that magnificent series of parks and boulevards will be carried out. Scholar, artist, and gentleman, seemingly in every sense of the words, the name and fame of Charles Eliot will grow as the beautiful places he has designed and created develop into the full maturity he could not wait to enjoy.

PERSONAL.

Mr. John G. Barker has associated himself with Mr. Blaisdell, Landscape Architect, of Boston, in the work of landscape gardening, and is at present engaged on work in New Castle, Pa.

Mr. Otto Buseck succeeds the late Henry McCrowe as superintendent of the parks of Paterson, N. J.

Mr. Frank D. Willis, secretary Oakland Cemetery Association, St. Paul, Minn., suggests that as the Congressional Library, Washington, D. C., is finished, every cemetery association in the country should forward to that institution well bound copies of its publications.

RECEIVED.

Parish Notes for February, St. John's Church, St. John, N. B., Canada. This issue contains some suggestions of Funeral Reform from the Episcopal point of view.

Preliminary List of Premiums offered by The Horticultural Society of Chicago, to be awarded at the Annual Fall Exhibition, November 9th, to 13th. 1897.

CORNELL UNIVERSITY AGRICULTURAL EXPERIMENT STATION, ITHACA, N. Y.

Bulletin 124. January 1897. The Pistol Case-Bearer in Western New York.

By M. V. Slingerland,

Bulletin 125, Cornell Nursery Bulletin 125. February 1897. A Disease of Currant Canes. By F. J. Durand.

Bulletin 126. The Currant-Stem Girddler and The Raspberry-Cane Maggot. By M. V. Slingerland.

Bulletin 127. February 1897. A second account of Sweet Peas. By A. P. Wyman and M. G. Kains.

Bulletin 128. February 1897. A Talk about Dahlias. By Wilhelm Miller.

Act of Incorporation and By-Laws of the Harmony Grove Cemetery, Salem, Mass. Rules and Regulations of the Board of Trustees, etc. Illustrated by half-tones.

Rules and Regulations, 1897. Riverside Cemetery, Defiance, Ohio. With many half tone illustrations.

Annual Report of the Woodlawn Cemetery, Everett, Mass., for the year ending December 31, 1896. Also Rules, Regulations and By-Laws. Illustrated.

Report of the Board of Trustees of the Greenwood Cemetery, Brooklyn, N. Y., for the year 1896.

Fourteenth Annual Report of the Board of Park Commissioners of the city of Minneapolis, Minn., for the year 1896. Illustrated with many half tones.

Regulations of the Government of the Gettysburg National Park, Gettysburg, Pa., 1895.

Fifth Annual Report of the Board of Park Commissioners of the City of Duluth for the year 1896. With several half tone illustrations.

DREER'S LIBRARY. GRASSES AND CLOVERS, WITH NOTES ON FORAGE PLANTS. Henry A. Dreer. 714 Chestnut Street, Philadelphia, Pa. Postpaid 25 cents.

As the title page suggests this is a handbook answering a few grass questions, with

notes on forage and root crops, and a chapter on lawn making and management. While the book is intended to be a grass primer as the preface states, there is a vast deal more of valuable practical matter in its pages than the term implies. In view of the distinct efforts to advance on all lines of agricultural development, a little work of this kind, practically written, well illustrated, and replete with valuable suggestions, is timely and a helpful aid to further effort.

CATALOGUES.

Parson's & Sons Co., L'td., Kissena Nurseries, Flushing, N. Y. Select list of Hardy Trees and Shrubs.—Wholesale Trade Price List and Supplement to same, Southern Iowa Nursery, Cantril, Iowa.—Wholesale Price List of Michigan Wild Flowers, collected and for sale by The Michigan Wild Flower Co., Rochester, Michigan.

Catalogue No. 17 C. Hanika & Sons' Architectural Iron Works, Manufacturers of Plain and Ornamental Iron and Wire Fencing, Railings, Crestings, Finials, Stair, Jail, Station House and Column Work. Muncie, Indiana. Fully illustrated.

Lawn sprinklers are being looked upon as a necessity and mechanical contrivances are being incorporated in their construction to make them more effective and labor saving. The "Twin Comet" and "Little Giant Traveling Sprinkler" are most ingenious devices and very reasonable in cost. They are manufactured by the E. Stebbins, M'fg. Co., Springfield, Mass.

The spraying of shade trees for the destruction of insect pests is becoming general and spraying pumps a necessity. The P. C. Lewis M'fg. Co., Catskill, N. Y., state that Paris Green or London Purple are sure remedies and they make a Spraying Rig for this purpose, guaranteed to be perfectly satisfactory.

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PARK AND CEMETERY.

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CONTENTS.

EDITORIAL—CONVENTION OF PARK COMMISSIONERS, ETC.	
—DECORATION DAY POLITICS IN THE PARKS—ARBOR DAY.	49
VILLAGE IMPROVEMENT.....	50
*PLAZA, ALAMEDA AND PASEO IN THE CITY OF MEXICO	51
FLORAL CLOCKS.....	53
*THE DEDICATION OF THE GRANT MONUMENT.....	54
*A FREAK OF NATURE.—WATER LILIES.....	56
*MEMORIAL GATEWAY, MONSON, MASS	57
*NOTES FROM TOWER GROVE PARK, ST. LOUIS.....	58
HERBACEOUS PLANTS.....	60
*THE FAUNA OF THE CATACOMBS OF PARIS	61
*GARDEN PLANTS—THEIR GEOGRAPHY, XVIII.....	62
*A GLIMPSE AT FINSBURY PARK, LONDON, ENGLAND.	64
*TRUE OUTLINES IN CURVED DRIVES.....	65
*A FOLIAGE BED.—FROM OUR EXCHANGES.....	66
PARK NOTES	68
CEMETERY NOTES.....	69
CORRESPONDENCE.....	70
LEGAL.....	71
PUBLISHERS' DEPARTMENT	7

*Illustrated.

THE vast importance which the development of public parks has assumed since the matter has been better understood and appreciated has manifested itself in the calling of a convention of Park Commissioners, Landscape Gardeners, Architects, Engineers and Superintendents to be held at Louisville, Ky., May 20. The call was made by the Louisville Board of Park Commissioners and has met with a decided welcome, which promises a most imposing gathering. That the idea has been under consideration elsewhere it may be stated that the Park Commissioners of Minneapolis had already begun correspondence looking to a convention at Minneapolis in July, but has transferred its influences to the cause at Louisville. The time is undoubtedly ripe for the exchange of ideas concerning park work and development among those immediately engaged. The practice involved in the higher departments of park improvement is of such a diverse and highly intellectual order, to say nothing of the question of art which must be credited

also, that interchange of ideas and communion of congenial intellects are necessary to foster increased power in the forces that lend themselves to higher efforts. It is reasonable to expect that the cause of landscape art, coupled with the practical features to make it available for the people, will be materially assisted by the coming convention, and if out of it there should spring a permanent organization whose object should be mainly landscape art development, happy results would soon ensue, and a power be set in motion which might easily regulate existing evils and create confidence in the public, a matter so requisite to the speedy solution of important problems. Among the proposed topics for discussion are: The purchase and provision of lands; the proper boundaries of parks and public grounds; the grading and proper construction of roads through parks and parkways; the construction of foot and bridle paths; the planting and beautifying with trees and shrubbery; the protection of trees; the cultivation and maintenance of lawns; the provision of bicycle paths; the maintenance of order and public service; the use of parks for picnics and athletic sports; the water supply—best provided; the construction and maintenance of interior squares and places; the question of street trees—kinds, protection and planting. Several papers have been promised on important features of park work.

DECORATION DAY is another institution, the observation of which exercises much influence of good, besides the special object of "keeping the memory green" of those who fell in the country's service by decorating their graves with the early flowers of the year. By natural association, as it were, it has also become a time for the dedication of memorials, both in a public and private sense, so that it is a day which custom as well as law has set apart, and by reason of the common interests and sympathies involved it is one of great import in our national life. Its influences are becoming more and more apparent in the smaller places, and it is in such places that it has exerted a power of good. Since the appointment of a "Decoration Day" there has been a constantly increasing willingness to clean up our smaller cemeteries in anticipation of the visitors and the ceremonies to be enacted. It has stimulated the idea of citizenship by reason of the knowledge of the cost of preserving it inviolate; and to provide for the actual work

of decoration it has encouraged the love and cultivation of flowers and plants, in itself a great and good thing, for while testifying to the devotion of the people to its fallen heroes and to the cause for which they suffered, the perfumed incense of flowers permeates the atmosphere of devotion to duty, and emphasizes its obligations both to the living and the dead. In our cemeteries it is the culmination of the superintendents' spring efforts to display the beauties of his grounds for a few short hours, to be succeeded by another period of activity to make good the damage due to the ceremonies of the day. With all its vexations it must be considered a labor of love, and our cemeteries, provided the season is bountiful, never look better than in the early hours of Decoration Day.

THE New York *Sun* some time since forcibly touched upon the question of the selection of members of Park Commissions. It is a very important matter, and generally speaking has been solved satisfactorily. But a word of caution is always in order, and where the results of misplaced confidence, or culpable intention, may tend to so much harm for all time, it is proper to suggest that in the selection of men to fill the important positions of park commissioners, established integrity, business ability, education, refinement, natural taste and aptitude for work to be considered, are among some of the qualifications which should influence the appointive power in the choice of park commissioners. Many questions arise in park development which require a high order of thinking, combined with an artistic sense, and for their best solution, it is quite certain that only a properly qualified board can successfully grapple with them.

IN most of the States authorizing Arbor Day as an economic institution the appointed day has come and gone. Summing up the degree of its observance it may safely be said that it is attracting more attention year by year as the people come to learn its import. Not alone is it a wise provision in general, because it tends to replace what has been ruthlessly appropriated for commercial purposes, nor because it provides trees in treeless localities—a most wise intention—nor that it lends itself to the improvement of public places and homes; but immeasurably wiser is it because it is one of the greatest educators under proper direction that legislation has encouraged. The anticipation of the day in the public schools, where attention has been carefully bestowed, leads the mind of the young into channels full of refreshing stimulus, and the necessity of being prepared for the day itself promotes investigation into a broad field of nature's realm, and results in the acquisition of certain knowledge

which will find fruition many times in life and always to the good of the community. And again, the encouragement of the observance of Arbor Day leads directly to the consideration of the improvement of the home lot and highway, and in fact it may be readily subordinated to this idea to the welfare of the entire community. The whole country needs such improvement, and the fostering and active encouragement of the ideas underlying the formal observance of the day will rapidly change the face of the country and give to life more zest and to labor more spirit. Some of the States have added to the tree planting idea that of the care of birds. By all means let the care of birds be included in Arbor Day legislation; it is both appropriate and proper. Trees and birds have been associated since the creation, and indeed the birds are to-day sorely missed where circumstances have either driven them away or exterminated them. Legislature has been remiss in failing to provide for the proper protection of bird life, but it is time to believe that an era of refinement is setting in, superinduced by broader education, not by any means the least of which is the increasing attention given to nature as we see it all about us. To understand her better is intellectual progress. It is exceedingly gratifying to note the activity of the public press in regard to Arbor Day, and to it is largely due the increasing attention to the higher duties involved in its observance.

VILLAGE IMPROVEMENT.

The improvement of the villages of the various sections of the United States is one of the very broadest questions that can be considered, for their wealth and status is far more varied than that of the cities and towns.

A village may be anything from half a dozen houses and a railway shed to an aggregation of 10,000 or 12,000 well-to-do people.

Their prosperity will always or nearly always depend, however, upon the steady, continuous employment of the inhabitants. Instead of the tendency to rush all life and industry to the large cities, would it not be far better to divide the industries among the villages? At the north especially, and along the railways, how much better it would seem to be to divide the manufactories and spread them over the country than cluster them in a stifling city. Then, perhaps, the conditions would be such that rural pursuits could be followed in the summer and manufacturing in the winter. If this were the rule, overstocked markets on the one hand and unemployed labor on the other would be less frequent, and the very change of occupation would be conducive to health and life and greater contentment. Such is the system in the oldest civilizations of the

world, and we hear but little from them of the scarcity of farm labor.

It will be said that banking and transportation facilities would be lacking frequently, but the greater cheapness of the land would more than counterbalance the slight inconvenience, and the resultant permanence and contentment of the work people would be worth striving for.

There are a number of villages in the country to-day possessing advantages of the kind hinted at, and their thrift is potent to anyone crossing their boundaries.

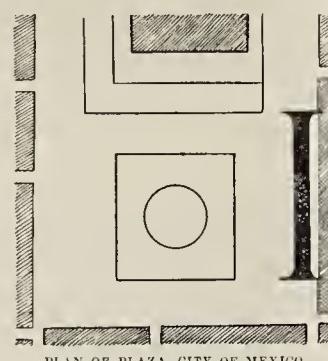
How best to provide for a something to elevate the village populations and provide them a never failing fund of recreation is one of the most worthy subjects of thought.

Let them have a "common," a playground, by all means to begin with, where the young men and women too may have free opportunity to stretch themselves at archery, tennis, baseball, cricket and athletics. A broad, ample field of turf with a fringe of trees around it fills the bill exactly, and given the land in a central location it is easy to attain. It simply requires such plowing and harrowing as is given to a cornfield under the best culture, and seeding very early in the season with some three bushels per acre of lawn grass—red top or blue grass or both, with a quart or so of white clover per acre sown separately. About the first of July, if the season is at all favorable, the reaper may be run over it—the lawn mower for the rest of the season.

As for the planting of trees, it may be done at once, for it is not expensive. The trees themselves, according to their kind, may be supplied at from 50 cents to perhaps \$1.25 each, and their planting may cost anywhere from 10 cents to 50 cents each, depending upon how they are planted and who plants them. Never plant them too thick. Take but little heed of different advice. The time to "thin trees" in this or any country is when they are planted. There is absolutely no safety in deferring their thinning to a future time. Nearly all the park and street planting of the country has been ruined by the "plant thick and thin quick" heresies, for the "thin quick" part has not materialized.

A "belt" of trees around a common playground or park if you will may be a single row, or better, a somewhat irregular belt, thickened in places by an undergrowth of such shrubs as will thrive in the climate. These are cheaper by a third, or a half, or sometimes three-quarters, than trees. Often they will be matured and gone before the trees are half grown, and this is precisely the kind of thickening that is sensible, and not such as will crowd and suffocate and permanently strangle, as trees in the woods strangle each other.

PLAZA, ALAMEDA AND PASEO IN THE CITY OF MEXICO.



PLAN OF PLAZA CITY OF MEXICO

I.

T is in conformity to an ancient law, found in the "Recopilacion de Leyes de los Reinos de los Indias," completed in 1680, and probably traceable back to a Roman source,

that upon laying out a Spanish colonial town, a rectangular plaza was made the basis of operations. And thus it is that a plaza is an indispensable characteristic of a Mexican town. If the town was inland, the plaza was to occupy its territorial centre. If upon a river or bay, it was to be located upon the water front. It was intended that the juzgado should be erected in the centre; and other public buildings, including the church, were to front upon it. The sides of the plaza were in most cases towards the cardinal points, though some cases have come under the observation of the present writer, of the north and south line running through corners diagonally opposite.

The original intention was to make the plaza, as the name, by Spanish usage, signifies, the market place. But more recently the custom has prevailed of making it a park, so that the idea conveyed by the name in Spanish American towns, is that of a garden adorned with a fountain, and within the shadow of church towers.

Besides plazas, most of the larger Mexican towns have Alamedas and Paseos. Chihuahua, Aguas Calientes, Queretaro, Leon, Guadahajara Morelia, Puebla and Vera Cruz have notable examples of one or the other or both. Alamedas were originally intended as parks, and received their name from the alamos, poplar or cottonwood trees, with which they were planted. The present distinction between a plaza and an Alameda would seem to be that the latter is by far the larger and is upon the outskirts rather than in the centre of the town.

The word paseo is used for a procession, but it is also applied to an elaborately adorned public thoroughfare. Apparently, however, before the term can be applied, the drive must be made a place of fashionable recreation. And upon seeing the paseo of a large city upon days when it is being put to its intended use, one may perhaps see the analogy between the "procession" and the fashionable drive.

The City of Mexico has secured several plazas, and at least three Paseos, yet but one Alameda,—which suggests another differentiating character-

istic of an Alameda. And the city of Mexico furnishes admirable examples of the three, so located that they may be embraced in the description of what in an American town would be regarded as a single street or avenue.

To begin with the Plaza Mayor de la Constitu-



PLAZA MAYOR, CITY OF MEXICO.

cion, the main plaza, the heart of the city which is the capital of our southern neighboring republic. Resisting the temptation to give a score of interesting details of its history, there are some that are worthy a hearing in this paper. The site is approximately that of the legendary discovery that caused the Indian pueblo of Tenochtitlan to be established where it was, and it was subsequently marked by the great Teocalli in that pueblo. After Tenochtitlan was destroyed by the Spanish Conquistadores of the sixteenth century, a Spanish city at first occupied but little more space than what is now included within the borders of the plaza Mayor.

It is noted in history that during the inundations which visited the city of Mexico in the seventeenth century, when the streets remained for years at a time submerged in three or four feet of water, the plaza remained above water. To the present writer's mind, this is cumulative evidence that the ancient teocalli, so often mentioned in books about Mexico, was a mound of earth faced with stone, and its destruction by the Spaniards consisted merely in removing the stone facings. And it took more than a century to reduce the mound to the level of the adjacent lands.

For centuries the plaza was an ill-kempt place, the scene of many a political disturbance and of much bloodshed. Early in the seventeenth century the market was removed therefrom by royal order,

but the petty venders who have pestered the locality with their cajoncitas (little shops) throughout its history, remained. They were driven out by fires and royal orders about the middle of the century, when a system of drainage acequias was put down. Towards the end of the century the plaza was the scene of a riot in which nearly three hundred cajoncitas were used as fuel in an attempt to burn the palaces of the Archbishop and the Viceroy. Again the petty venders returned, despite the provision of the Parian, a bazaar erected by the city on the south side of the plaza.

There is a print extant of the appearance of the plaza during the eighteenth century. Directly in front of the Viceregal palace stood a gallows and a frame for exhibiting the heads of executed criminals. The walled cemetery of the Cathedral, crowned the plaza on the north. A statue of Ferdinand IV, not remarkable as a specimen of the sculptor's art, stood in the centre of the square. Filthy ditches surrounded it.

Such was the view from the Viceregal palace, when in 1789, Don Juan Vicente de Guemes Pacheco de Padrilla, Segundo Conde de Revillagigedo, arrived in Mexico as the fifty second viceroy. He was a reformer, although as eccentric a man as his name was long. Among the earliest reforms instituted by him in his capital, was that of the plaza, by the removal of its objectionable features and the improvement of its drainage.

The next print we have representing the plaza is dated in 1803. It shows an immense glorieta, enclosed with stone coping and balustrade, with four gates of wrought iron at the cardinal points. In the centre was erected the equestrian statue of Carlos IV. The bitter anti-Spanish feeling engendered in the was for Mexican Independence endangered this statue, and it was first enclosed in a huge wooden globe painted blue and finally removed, in 1824, to the patio of the University of Mexico. In 1828 the plaza was the scene of another insurrection. The Parian was sacked and partially destroyed. Fifteen years later its site went to enlarge the Plaza Mayor. About the same time the foundation was laid of a monument intended to be commemorative of the heroes of the war for Mexican Independence; and this foundation, (in Mexican Spanish, "Localo") has given a popular name to the plaza, that has quite supplanted its proper and more formal title.

The next change took place under the Imperial government of Maximilian. The Localo Garden was laid out and planted. It comprises but a small part of the plaza,—being about three hundred feet square and having the zocalo for a centre. Work upon the monument stopped with the foundation, and upon it a bandstand has been erected. South

of the garden is a cobble paved space about one hundred feet wide, including the site of the Parian, and still largely occupied by the ever persistent cajoncitas. East is the Plaza de Armas, about two hundred feet wide, extending along the whole front of the National Palace,—cobble paved, and with no other adornment than a double row of sickly trees. There is a space equally broad on the west side of the garden.

The Plaza de Armas extends northerly along the easterly side of the Cathedral and Sagraria grounds forming what is known as the Plaza del Seminario. Its only adornment besides its trees is a handsome bronze statue commemorative of the services rendered to the city by Enrico Martinez, an engineer of the seventeenth century, who constructed the tunnel which has since become the drainage cut of Nochislongo.

Since 1880 the atrium of the Cathedral north of the plaza has been laid out in gardens upon the same general scheme as the Zocalo garden. These gardens extend along the western side of the Cathedral where the flower market has been erected.

Fault might be found with the park treatment which the Plaza and its environments have received, that the gardens and tall trees mar the architectural effect of the great Cathedral, by forcing the observer much closer to that structure than the requirements of good perspective allow. But these gardens are exceedingly beautiful in themselves and are in happy contrast with the vacant and barren aspect which this focus of the life of the Mexican capital formerly presented. And it is doubtful if any other treatment could have been made so successful in beautifying the spot.

A. H. N.

FLORAL CLOCKS.

Among many interesting characteristics of the floral kingdom, nothing is perhaps more striking than the regularity with which many plants open and close their flowers. And not only that, but throughout the greater part of the 24 hours, flowers may be found expanding or closing their petals at stated hours, and with so much regularity that the time of day may be fairly judged by their development. This peculiarity has frequently led to the creation of flower beds arranged in the form of a clock, in some leading public and private gardens, and it is stated that Mrs. John D. Rockefeller, who is an enthusiastic botanist, is arranging such a bed on the grounds of her Hudson River residence, at Tarrytown, N. Y., from designs of a Cleveland landscape architect.

The University of California, at Berkeley, Calif.,

also proposes to create one this present season

There have been several examples of such devices in England, notably those of the Duke of Westminster and the Baroness Burdett-Coutts, that of the latter displaying the closing hours, and it is upon the question of showing the opening or closing hours that decision hinges.

In Mrs. Rockefeller's floral clock, the yellow dandelion will form the hands; they open at 5:30 A. M. and close at 8:30 P. M. A number of plants have been suggested to complete the device, and the selection will be made by Mrs. Rockefeller.

From ancient times certain flowers have been the common timepieces of the peasantry. In Pliny's day the "day lily" opened at 7 A. M. and closed at 5 P. M. and it still keeps its regular time according to all accounts. In the poorer rural districts of Scotland, school is often dismissed by the yellow goats-beard of the meadow which closes promptly at noon. It does likewise in France.

There are some sixty-seven flowers known to have regular times for opening or closing their petals, and these vary in a remarkably small degree, and then chiefly in climates with sudden extreme changes.

In order to carry out the idea to its fullest utility, it is necessary to have within available reach an explanatory guide, and this is usually supplied in a waterproof case, or on waterproof material. The study of the clock then becomes an educational pleasure.

The proposed Rockefeller clock has created a great deal of interest in the subject and in connection with it the Chicago *Tribune* recently published the following table of time blooming plants, furnished by a Lincoln Park Gardener:

Plant.	Opening hour.
Morning glory (<i>Ipomoea Purpurea</i>)	2 a. m.
Rutland Beauty (<i>Calystegia Sepium</i>)	3 a. m.
Oyster plant (<i>Tragopogon Porrifolium</i>)	4 a. m.
Poppy (<i>Papaver Somniferum</i>)	5 a. m.
Bitter Sweet (<i>Dulcamara</i>)	6 a. m.
Water lily (<i>Nymphaea Odorata</i>)	7 a. m.
Scarlet pimpernel (<i>Anagallis Arvensis</i>)	8 a. m.
Field marigold (<i>Calendula Arvensis</i>)	9 a. m.
Red sandwort (<i>Arenaria Rubra</i>)	10 a. m.
Star of Bethlehem (<i>Ornithogalum Umbellatum</i>)	11 a. m.
Passion flower (<i>Passiflora Cerulea</i>)	12 m.
	1 p. m.
Feverfew (<i>Pyrethrum Parthenium</i>)	2 p. m.
	3 p. m.
Marvel of Peru (<i>Mirabilis Jalapa</i>)	4 p. m.
Viscid Catchfly (<i>Silene Noctiflora</i>)	5 p. m.
Evening primrose (<i>Oenothera Biennis</i>)	6 p. m.
Lycus Vespertina	7 p. m.
Night blooming cereus (<i>Cereus Grandiflorus</i>)	8 p. m.

THE DEDICATION OF THE GRANT MONUMENT.

On April 27, the seventy-fifth anniversary of the birthday of General U. S. Grant, the imposing mausoleum erected to his honor in Riverside Park, New York City, was dedicated. The ceremony took place in the presence of the Chief Magistrate of the Nation, his Cabinet and the accredited representatives of the foreign powers, surrounded by a vast concourse of people and with civic and military pageantry seldom witnessed. All to pay homage to the memory of a man who in life had established his right to the love and respect of his fellow-citizens.

His remains now rest in the red granite sarcophagus quarried in Wisconsin, into which they were quietly laid on removing them from the riveted steel casket, in which they had been inclosed awaiting their final resting place.

The building is, architecturally speaking, a beautiful production, designed by Mr. John H. Duncan, architect, and was selected by the committee in charge from a large number of competitive designs. In style the architect followed the best Greek precedent, modifying the details to the requirements of the present times. The lower part of the building is of the beautifully simple Doric order, and the upper part is Ionic.

The general dimensions of the main building taken from the architect's description is as follows: A square base, 100 feet by 100 feet at the ground line, exclusive of the steps, and the projection of the portico on front and apse at rear. The total height of the mausoleum would be about 160 feet from the base line, or nearly 290 feet from the water level of the Hudson River. From the center of the Memorial Hall floor to the dome is 100 feet. The supports of the dome are four arches, under three of which are galleries which are reached from the two circular stairways in front. From these access is also gained to the inner and outer galleries above by stairways in the thickness of the walls. The outer gallery is 130 feet above the ground and affords magnificent views of the surrounding country. Particular study was given to the crypt, which is large and roomy, and is reached by stairways in the rear.

Generally speaking the principal materials of construction are a light gray granite from North Jay, Me., for the exterior, and white marble for the interior.

The development of the exterior architectural features includes on three sides of the lower portion engaged colonnades of four columns, with ample plain wall space on either side and above them, except that in the space above them there is a recessed panel which may be used for bas-reliefs.

The principal front and entrance is more elaborate, as may be gathered from the sketch. The style of the side colonnades is still maintained, but in front and extending it beyond on each flank is the colonnade forming the portico. A marked feature of this portico is that it omits the pediment, which affords an opportunity for a further series of statuary. The comparative plainness of the base of the building is supplemented by the beautiful Ionic peristyle of the drum above it, which is excellently proportioned, and of which the detail is admirably worked out.

So little has been said in the press about sculpture that it might be inferred that it had been forgotten or intentionally omitted, but in the working out of the scheme the architect has considered the provision of a number of statues and bas-reliefs in the decorative features of the mausoleum.

Two massive bronzed doors under the portico give entrance. The doors are really ash, covered with sheet bronze; they are sixteen feet four and a half inches high, and of a united width of nine feet, one and a half feet thick. With the exception of three panels in each, and rosette ornamentations, they are very plain.

The pedestal beneath the sarcophagus is of dark Quincy granite, ten feet ten inches square.

Only one sarcophagus, that of General Grant, is placed; the other for Mrs. Grant is quarried, but not finished.

The total cost of the memorial before final completion it is difficult to estimate, the latest sum given being \$600,000. It is gratifying to feel that at last the monument, whose financial requirements were subjected at first to so many vicissitudes, is completed and serving its purpose. Soon after General Grant's death, feeling that an adequate memorial was due him, in 1885 a fund was started for the purpose, which in a few weeks reached a hundred thousand dollars. Then it languished for years, or until 1892, when the strenuous efforts of the working committee again set the project going and finally to a successful issue.

The site of the monument is almost beyond expression beautiful. Situated on a knoll close to the Hudson river, and high above its waters, it commands a wonderful panorama of water and landscape, immense cities and picturesque country, while its immediate surroundings—Columbia College and St. John's Cathedral—will lend themselves to the effect. And, on the other hand, it presents its classic outlines to the far away beholder from many directions, lending grandeur to the landscape and lustre to man's accomplishments. Altogether it is an appropriate memorial to a man worthy of a nation's tribute.

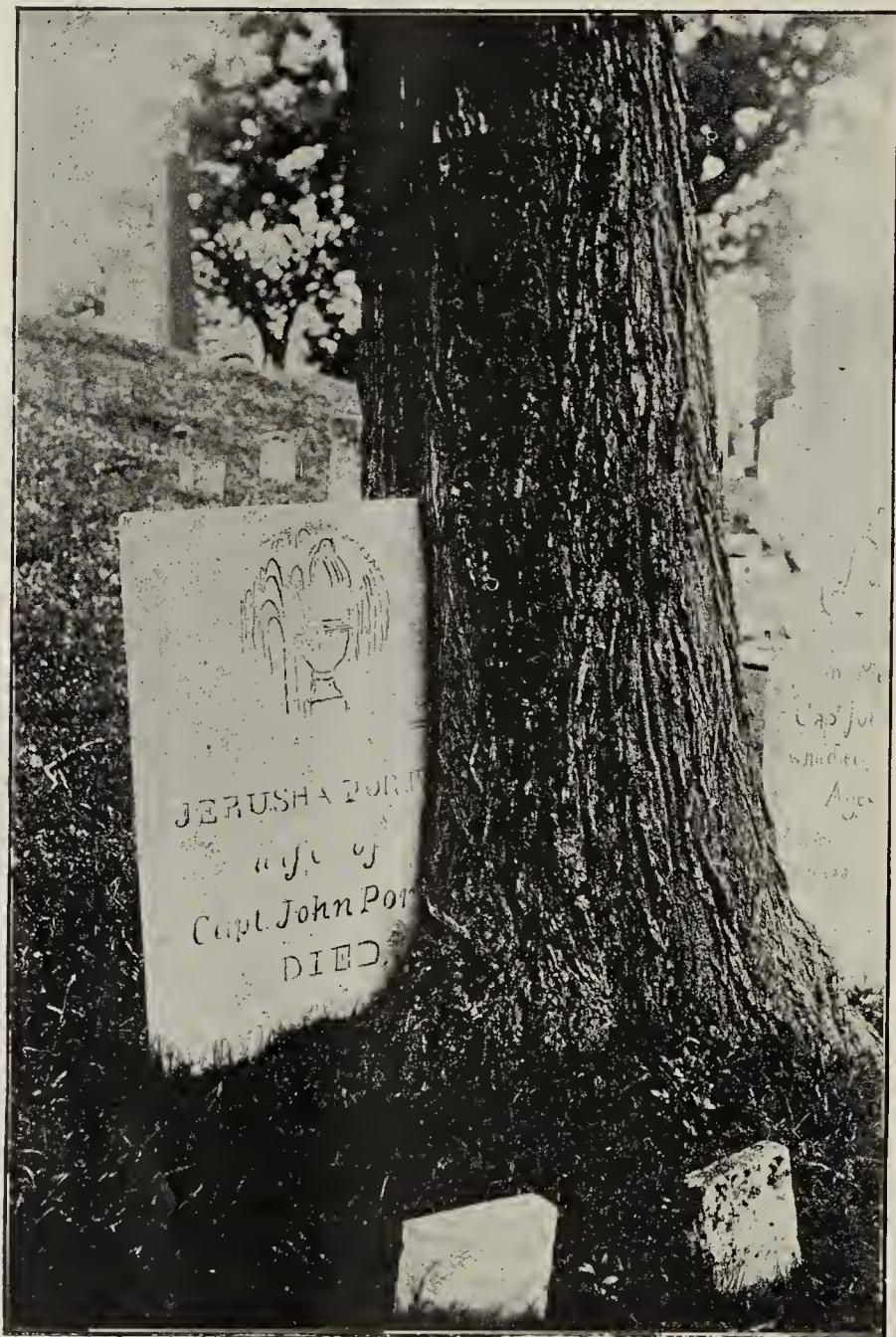


THE GRANT MAUSOLEUM. (By courtesy of the *Scientific American*.)

A FREAK OF NATURE.

Many notes have been recorded of curious efforts of nature, especially regarding trees and their peculiarities, and the accompanying illustration, which is here given through the courtesy of Mr. George W. Scoville, funeral director, of Norfolk, Conn., shows the strange growth of an elm in Cen-

ter Cemetery is an old spot containing many interesting relics of by-gone days, which afford food for thought in contrast with the ideas of to-day. It is beautifully situated as so many New England cemeteries are, is owned by the town and very great care and attention is bestowed upon it.



A FREAK OF NATURE.

ter Cemetery, Norfolk. The close embrace in which the passing years have aided the tree to hold the tombstone, have partially hidden the inscription. It reads: "Jerusha Porter, wife of Capt. John Porter, died January 13, 1828." To the right of the tree can be seen the stone of Capt. Porter, on which is inscribed: "In memory of Capt. John Porter, who died April 14, 1790, aged 46 years. Nor sex nor age can death defy. Think, mortal, what it is to die."

WATER LILIES.

Mr. David Grinton, superintendent of Oak Grove Cemetery, Delaware, O., who has given particular attention to the subject of Water Lilies, and with marked success, contributes the following practical suggestions on their care and cultivation:

We have no plants in our grounds that attract so much attention as our water lilies. About eight years ago I commenced using them, and they need less care after once getting them started than a bed of geraniums. The varieties I principally grow are the *Nelumbium speciosum*, *Nymphaea Zanzibarensis*, *Nymphaea chromatella*, *Nymphaea odorata*, *rosea* and *alba*.

Our soil being a clay one, I prepare the tanks in the following manner: By excavating about two feet in depth and using the best of Portland cement to cement the bottom and sides, I use the same kind of soil as for other plants —rotted sod, cow manure and leaves, well decayed. After the bed is ready plant the *Nelumbiums*, gently forcing them into the loam with the hand, and in the fall I cover the bed with plank and leaves and brush generally. Last fall we had no brush and we used corn stalk, but found that kind of covering attracted a large number of rats and mice, who had evidently wintered there very comfortably, but on examination they did not appear to have injured the tubers. Those varieties mentioned are the easiest grown, and, I

think, give more satisfaction than any others.

Nymphaea Zanzibarensis is a free bloomer and very fragrant. I raise it from seed each year. The seed is sown in shallow pans about three inches deep, and with about two inches of soil kept wet to the consistency of mud. As we have no greenhouse, we prepare a hot bed frame and keep the temperature at about 90 degrees, or as near it as possible, and the seed soon starts. When about one-fourth of an inch in height we transplant the

seedlings into thumb pots, which we place in pans of water up to the rim of the pot, and then about the beginning of June they are transferred to the bed. The bed in which I grow them is 25 feet by 5 feet, and as by that time I generally have plenty of sashes not in use I place them over the tank loose, and the plants soon come into bloom. From this bed last summer one could cut almost every day about 100 blossoms.

The *Nymphaea chromatella* is easily propagated by dividing the roots. It is a free bloomer of bright canary yellow. *Rosea* and *alba* are propagated in the same way. The *Nelumbiums* are frequently troubled with plant lice, or aphides, a simple remedy for which we found was blowing Hellebore or tobacco dust on them with a bellows early in the morning, when the dew was on them. Of course if one has a greenhouse a greater variety can be raised, but for general purposes and for something that almost anyone can succeed in the above varieties will be found the most desirable.

The laughing plant of Arabia produces small, bean-like seeds, small doses of which, when dried and powdered, intoxicate like laughing gas. The person indulging in the drug dances, laughs and shouts like a madman for about an hour, when he becomes exhausted and falls into a death-like sleep, which often lasts several hours.

* * *

A remarkable rose tree grows in the garden of the Chateau Eleonore, in Cannes, the summer residence of Lord Brougham, a nephew of the famous chancellor. The plant is a variety of the tea rose known as "Marie van Houtte." Though only six years old, it already measures sixty-seven feet in circumference, and will, if permitted, grow very much larger. Lord Brougham attributes its extraordinary dimensions principally to the soil, which consists of rich loam of great depth, and also to the liberal way in which its appetite for manure is satisfied. This tree is planted on the slope which descends from the house to the main road. It is of interest to recall the fact that the Chateau Eleonore was the first winter residence built at Cannes, which, it may indeed be said was literally "discovered" by Chancellor Brougham, uncle of the present owner, while in the beautiful garden, not far from this gigantic rosebush, is still to be seen the tree beneath the shadow of which the great chancellor used to sit toward the evening of his busy life. The gardens are now famous in Europe for tea roses, of which 150 varieties are grown.—*New York Herald*.

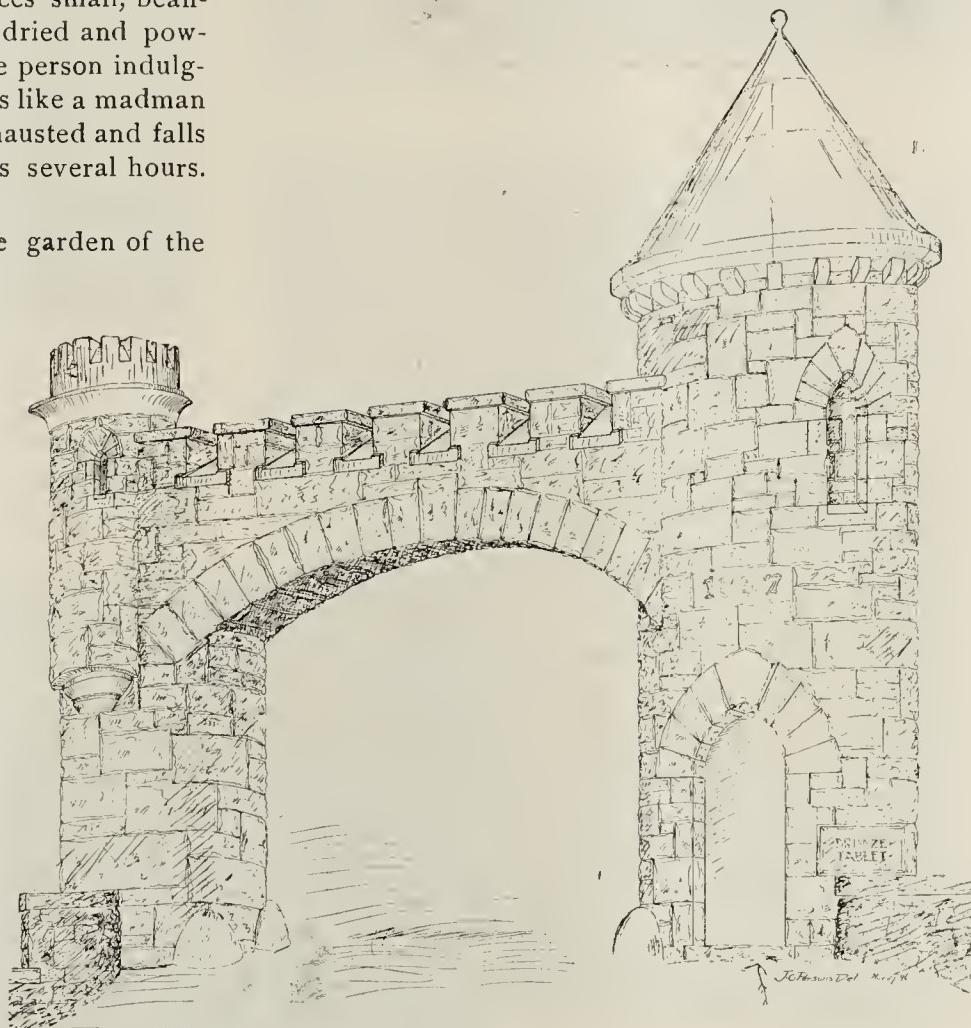
MEMORIAL GATEWAY, MONSON, MASS.

The accompanying illustration represents a memorial stone arch gateway, in course of erection at the North Main street entrance of No. 1 Cemetery, Monson, Mass.

This and other improvements in connection with the cemetery and town are the gifts of Mr. and Mrs. Harlan Page, of Philadelphia, in memory of Mrs. N. M. Field, Mrs. Page's mother. The entire structure will be build in granite, and a bronze memorial tablet will be set at the base of the main turret. The contract is in the hands of the W. N. Flynt Granite Company.

The town is very dear to the donors and their family as is evinced by the following:

Within a very short distance stands the beautiful soldiers' monument, presented to the town by Mrs. Field's father, C. W. Holmes, and the Academy, in which Mrs. Field's brother, C. W. Holmes, Jr., was so deeply interested, and in the interest of which he spared neither time nor money to put it upon its present excellent footing. Within a stone's

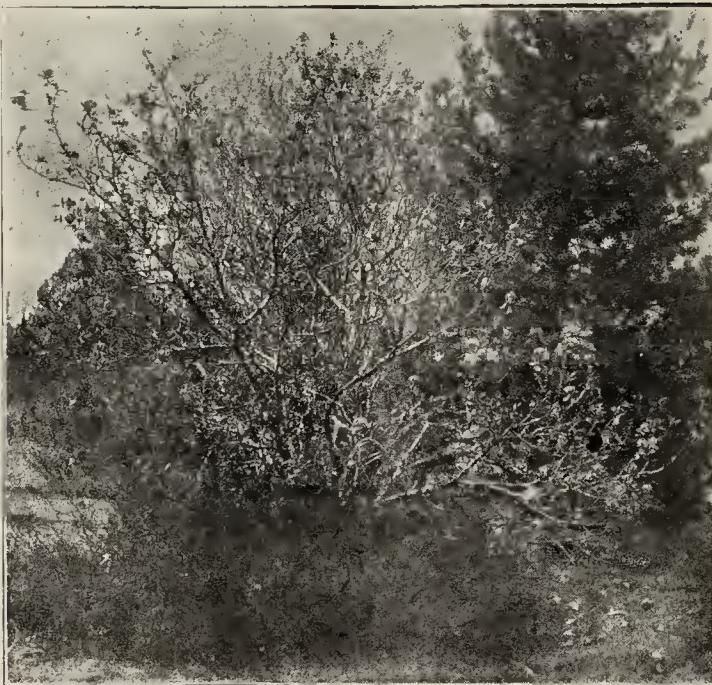


MEMORIAL ARCH ENTRANCE TO NO. 1 CEMETERY, MONSON, MASS.

throw of the soldiers' monument and the Academy is the Congregational church and its beautiful grounds, so dear to Mrs. Field and Mr. Holmes.

NOTES FROM TOWER GROVE PARK, ST. LOUIS.

Although the cyclone of last May destroyed and damaged a great number of trees in Tower Grove, it seems to have been a blessing in disguise, for it has resulted in a re-grouping of trees and shrubs



MAGNOLIA LENNEI

and a general opening up of vistas that is distinctly to the artistic improvement of the landscape effects.

The change wrought by clearing away and re-planting is already strikingly obvious, and doubtless will be much more so when the thousands of specimens set out this season have developed into the pictures intended by Mr. Gurney, the busy superintendent.

The formal lines of trees that originally outlined every drive have given way to broad views and nice perspectives in which the new and the old blend imperceptibly. The work as far as carried out shows proper consideration of breadth of effect in seizing the opportunity so unexpectedly offered for changing the style of the grounds.

Fortunately numbers of trees and shrubs were undisturbed by the great storm, so that no part of the Park looks meagerly furnished, and it never presents a more attractive appearance than when spring flowering trees and shrubs are in bloom.

Early May found Red Buds already past and Magnolias stellata, Conspicua, Lennei, Soulangiana, obovata, and purpurea past or passing, though some were still splendid objects, as M. Len-

nei with its lovely cups, like the pleasure boat of the Culprit Fay, "purple without and pearl within," and obligingly dropping its outer petals to disclose their dainty interior quite as women willingly exhibit the delicate colors and materials that line their rich wraps. Spiraea Thunbergii was past but the double flowered plum leaved Spiraea showed drifts of white bloom. Every shoot of the Horse Chestnut trees held an upright spike of greenish-cream flowers set off to perfection by handsome digitate leaves, and the snowdrop trees, Halesia tetrapeta, dripping thousands of silver bells were so delicate and airy that photography seemed quite inadequate for their happy reproduction. The fine flowering cherries and plums were nearly gone, and Cornus Florida was in all stages—passing, at its best, just opening, or not a flower open according to the position of each individual and seemingly very susceptible to slight differences of exposure and situation.

Breadth of treatment is undoubtedly the first consideration in all landscape work, but small or medium-sized parks located within easy reach of the masses of a great city must be all things to all men, and while breadth of effect appeals to a proportion of the driving public, certain details appeal to a vastly greater proportion of those who reach it by steam, electric, and elevated cars, so that the transitory summer decoration of such grounds is a subject of much thought to Park Superintendents.

It is said that all such decorations should be so set apart as not to mar the general landscape. At Tower Grove this end is accomplished as nearly as may be by grouping the temporary ornamental planting near the several direct entrances from car line terminals that are apart from the carriage entrances and from the principal drives. In such lo-



PLUM-LEAVED SPIRÆA.

cations it is sought to produce results that are good in themselves, and which by their isolation or their character shall not mar the harmony of the park when looked at as a whole.



HORSE CHESTNUT TREE.

Near the principal entrance for pedestrians there is a permanent oval plantation of evergreens, surrounded by a lawn that is skirted on all sides by gravel walks, the whole piece being several hundred yards long, and in a general way narrow in proportion to its length. Only an irregular strip of lawn with bordering shrub plantations on the outer edge, and numerous shade trees scattered through it, intervenes between the tract mentioned and the street, along which an electric car line passes, its terminus opposite the entrance. Here on every Saturday and Sunday during the out-of-door season throngs pass in and out, stopping to rest under the shade thoughtfully provided for their comfort, or to enjoy the newly created verdure, and here they expect to find something in the line of special floral decoration.

This year the leading feature takes the form of four circular mounds, two at each end of the long oval group of evergreens described, each twenty-four feet in diameter. On top of each mound there will be a single large palm, (either a Phoenix or other variety that will endure the sun and wind), in

a tub. The mounds will rise four feet above the level of the lawn, and probably will be terraced at about half their height, the ground above being sloped to meet the tubs, and both terrace and slope will be planted with wholly informal bedding plants—stiff, clipped carpet bedding having no part in the scheme. Between the four circles, two being the long way and two the short way of the permanent oval plantation of trees, the sod is removed to make large crescent-shaped beds curving outward from the trees, and these are to be planted for bold semi-tropical effects with Zanzibar Castor Beans, Cannas in variety and, at the front, with Nicotiana affinis and plants of similar character that retain a good appearance throughout the season.

These crescents will be extremely effective against their background of dark evergreens, and they will harmonize in spirit with the stately palms on their flowery bases. The simplicity of this large design will be enhanced by the field of turf sweeping out in every direction with no trivial small beds to break it, but at several points, on the outer edge of the plat, there will be groups of palms in tubs, sunk below the surface, and across the gravel walk on the narrow outer stretch of lawns there will be numerous scroll beds of rather formal character.



CORNUS FLORIDA

Mr. Gurney hints at unique features in the Park water garden this year, which I shall be alert to see and seize for the benefit of PARK AND CEMETERY readers.

Fanny Copley Seavey.

HERBACEOUS PLANTS.

At the meeting of the Pennsylvania Horticultural Society, held in February, Mr. Joseph Meehan of Philadelphia, read a paper on Herbaceous Plants, which contained the following practical information:

The herbaceous plants of our woods and fields are in great variety, and although there are many most beautiful kinds almost exterminated, speaking of the vicinity of this city, there are hundreds of sorts yet to be found, the looking for and finding the names of which would afford great gratification.

Referring to these, as well as to the herbaceous plants of other countries, there is a deal of satisfaction to be derived from their cultivation. While for the sake of masses of color, bedding plants will always be in demand, they will never occupy the place in the affections of the people that herbaceous plants do. The veronicas, the hollyhocks, the larkspurs and the columbines which grew in the garden of our boyhood, we never forget. We got to know them then, to know the spot they occupied, and we were wont to eagerly watch for their appearance as for that of some loved friend. It is this reappearance, after their winter's absence, that makes them so welcome to all.

It is common to hear persons say, when viewing woodland beauty, "How I would like to transplant it to my garden." While it is true that but few succeed in getting such plants to flourish in their gardens, it is nearly always from lack of knowing how to make them feel at home. Let me mention the trailing arbutus, *Epigaea repens*, as an illustration. It is the common belief that this lovely flower cannot be transplanted, and more than once I have corrected writers who have asserted this in public print. I have transplanted it successfully, so have many others. Two summers ago, when in England, I saw a nice patch of it in the Bagshot nurseries; and many other large nursery firms there offer it for sale. It is not a native there, so that it follows that at some time or other the plants were safely transported from here, seedlings of it being rare. This plant likes shade and moisture and to be undisturbed. It would not thrive in the open garden, but if small, bushy plants with a good ball of earth, be taken and set in a woodland where the required conditions exist they will live and flourish.

With native plants, a little care should be taken to provide for them situations as alike as possible to those they have been accustomed to. There are shade-loving plants, and those that grow in open places. It often happens that a partly shady border is at command, where those that demand it can be placed. It does not always follow that a wild plant is found growing in the best possible place for it. Take for example, the scarlet Columbine, found on damp rocks along the Wissahickon. I have seen better specimens of it in open places in gardens than ever I have seen wild, no doubt because the garden afforded better food than its native rocks.

To those who have not tried it, it would be a great surprise to find how much better plants grow when the ground about them is well mulched. It makes the plants feel more nearly at home than anything else that could

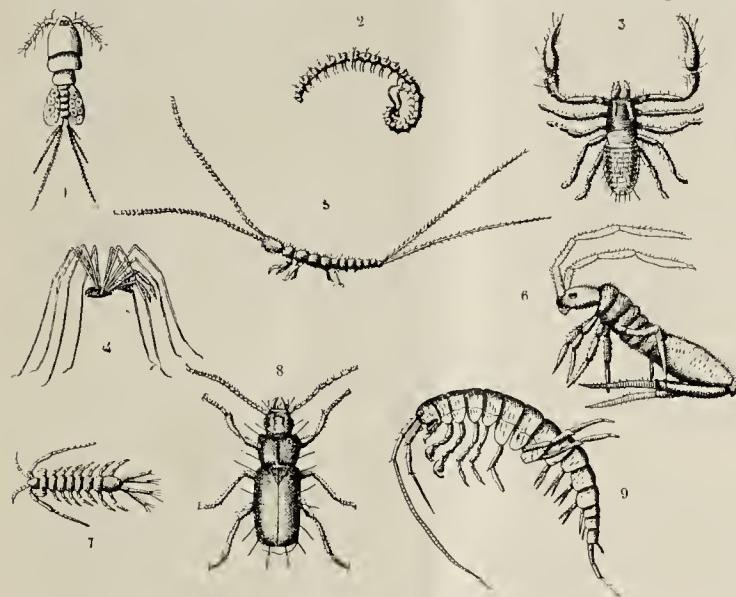
be done, save the giving of shade to some of them. Plants in the woods have shade above them and decaying leaves about them, and those in fields have grass or other plants about them, so that in both places the roots are cool. This is what mulching of the garden plants does, this and the preservation of moisture. Another thing rarely thought of is this: The wild plants in the woods are so covered with forest leaves that frost does not get to their roots. I am sure that all plants, hardy or not, are the better for this protection, and I would mulch afresh in fall, that the roots may have a winter covering. As herbaceous plants will repay good food given them, I would mulch with manure in the fall. Let it be long manure, the better to protect the plants; the strawy portion can be raked off in the spring, the remainder can be left undisturbed; it will be loose, and often it will be sufficient mulching for the summer.

Next to mulching there is nothing like a constant stirring of the soil. Let me say here that I have found many workmen in gardens totally unacquainted with the principles of hoeing. The hoe is drawn over a surface already hard, cutting off the weeds close to the ground. Then the weeds are raked off, leaving the ground in really worse condition than before, for the weeds shaded the surface if they did rob the ground. Hoeing should be fully as much to loosen the soil as to destroy weeds. Every stroke of the hoe should loosen up an inch or more of soil, and this loose soil should not be raked down too fine, or the first heavy rain will beat it down very hard. One would hardly believe what a help constant cultivation of this kind is to herbaceous and all other plants. And when rains come, the water is all taken up where it falls. Good mulching preserves the looseness of the soil in the same way. I am sure that very many more of our lovely native flowers could be successfully grown if mulching or hoeing would be made a feature of cultivation.

The propagation of herbaceous plants is mostly by division of the root or by sowing seeds, though when greenhouse facilities are at hand many sorts can be increased by cuttings. A little practice will suggest the best mode. Those that can be divided will show it after a year or two's growth, by the clump-like appearance displayed. There is no set time for dividing the plants. Very early spring is an excellent time; so is early fall. If done late in spring, the summer's heat comes on to them too soon, before well rooted, and in late fall frosts behave in the same way. The sowing of seeds is an interesting as well as a successful way; this work should be done early in the spring, out of doors, just as soon as the season will permit. There are some kinds, such as our wild aster, which are the better for being sown in the fall. Just before the ground freezes up will do. The seedlings will appear early in the spring, and, what is more, they will flower the same season, in the fall. It was my intention to name some fifty kinds of herbaceous plants, giving the months in which certain ones flower, but as the catalogues of nurserymen contain this information it seems hardly an advantage to do it here. I will but say that, commencing with April and ending with November something can be had for every month of the term.

THE FAUNA OF THE CATACOMBS OF PARIS.

M. Armand Vire, in an article on the Catacombs of Paris in *La Nature*, writes as follows on this gruesome subject: It must not be thought that these sombre galleries are completely void of inhabitants; not that anybody lives there habitually, nor do I refer to the 6,000,000 dead whose fleshless bones repose peacefully in these vaults. There is a category of beings scarcely visible unless closely sought, which creep, run, fly, walk and breed far from the light of day. They are generally insects, centipedes,



1. *Cyclops fimbriatus*, female.—2. Centipede.—3. Pseudoscorpion (blind).—4. Arachnid.—5. *Campodea staphylinus* (blind).—6. Podurelle.—7. *Asellus Aquaticus* (blind).—8. *Trechus micros*.—9. Crevette, *Gammarus puteanus*, (blind).

little crustaceans, which are curious to study from the fact that the absence of light produces modifications, atrophy of certain senses and exaggerations of others. Generally speaking, they are a transition between the species which live in the light and those of natural caverns. Color has disappeared; they are completely white. Coloring matter depends immediately on light, and as the Chlorophyll of plants disappears in darkness, so the color cells of these creatures disappear or waste away. However, certain kinds of creatures, notably the coleoptera, appear more rebellious to discoloration.

In some the eyes are present, black, normal in appearance, although the light of a lighted candle brought near them fails to make them budge, while the heat from it does; in some only a pallid dot is seen, in others an integument covers the place where the eye should be.

On the other hand, in some the sense of hearing is very acute, the least noise causing retreat; microscopic examination reveals the organs of hearing to be located in the antennæ or feelers, which have acquired truly extraordinary proportions.

In others it is an auditory system which is presented, and we see pores or feathery filaments de-

veloped in a very curious fashion. Lastly, in others the sense of touch is conveyed through a marvelous system of simple or bifurcated filaments, spread over the whole body, which appears to be a wonderful means of suggesting food or avoiding danger.

In the Campodes, rarer it is true in catacombs than in caverns, we find the antennæ extended to two or three times the normal length. The rear forks are tapering and equally elongated. Their organs of touch are developed to a maximum, and they bristle with little stiff, pointed hairs, terminated by spheres buried in the integument. One would call it a long pincushion full of pins. Antennæ and forks act for all purposes, touching the soil, feeling the wind, and it is only when everything appears tranquil outside that the creature issues from its sinuous den, wherein it feeds quietly on the cryptogames, which afford it nourishment.

Podurelles, with red eyes or without eyes, inhabit all the old mushrooms, and hop from all sides like white fleas. Uncolored worms creep over the earth, while active beetles, still colored, provided with little eyes, but already covered with long touch hairs, like their brethren of the cavern, run over the earth, and spiders of all kinds, often blind, lay their snares for invisible flies.

White centipedes attain a length of almost two and one-half inches, and feed upon old wood.

The waters are equally alive. Innumerable infusoria swim in all directions, clinging to the sand or other debris, while the agile cyclops, blind or provided with red eyes, swims rapidly and feeds on the infusoria. Often he is the prey of *Gammarus puteanus*, a long white shrimp, with or without rudimentary eyes, with many well-developed organs of sensation, and which also devours the pretty *Asellus* of the subterranean fountains.

Finally it is not uncommon to come across in old wood some blind *Pseudoscorpion* exercising his curious shaggy members.

Thus the subterranean fauna of Paris is rich and varied. It is more than a zoological problem. What is its origin, and how long does it take to effect such singular modifications? A mystery not solved, but nearer solution in that a special laboratory is about to be attached to the museum in the catacombs themselves.

Sackingen, in Baden, Germany, will erect a monument to Scheffel, the student poet, whose "Tompeter von Sackingen" made the town famous.

* * *

Cremation is more extensively practiced in Italy than in any other country. The first crematorium was established in Milan in 1876, and there are now fifty in operation in Italian territory.

GARDEN PLANTS—THEIR GEOGRAPHY, XVIII.

ROSALES. (B.)

THE GENISTA, ROSA AND DROSERA ALLIANCE.

(Continued.)

Rosa, the rose, is the type flower of this section of the alliance. The rose is familiar to all the peoples of the temperate part of the northern hemisphere—better known perhaps by their innumerable garden varieties than their many wild forms. Bentham and Hooker seem to desire to reduce the 600 recorded names to about 50 species, having a geographical distribution extending throughout the sub-tropical, temperate and sub-Alpine regions of the northern hemisphere; the actual southern limits

appear to be the mountains of Southern India and Abyssinia in the old world, and the mountains of Mexico in the new. The Kew arboretum lists, however, mention nearly 70 species as cultivated in the gardens, to say nothing of varieties, which are very numerous. Perhaps it isn't

possible to get consistency of statement even from an establishment professing the *Plantarum Catechism!* The Rose varies immensely, however; even a little island like Great Britain has half a dozen distinct specific types, which vary so greatly that botanists have perfectly buried them under names, and they are not yet done; neither are the roses ceasing to vary. As for the garden forms it is impossible to refer them with certainty to their origin. I notice that France and California both intend to attempt new classifications of the genus, but I fear they will be quite as arbitrary as all preceding them. The attempt to refer a variety to its species cannot be attended with certainty, for often the species is not well defined. It may very well be suspected that in many cases a variety would perish if put through a process of reversion in the center of production for the supposed species, yet it is probable that no other positive method of proving a variety presents itself. The natural climates will commonly soon take the airs out of a plant if it be left to perpetuate itself and fight competition. Sometimes a species



MARCHIONESS OF LONDONDERRY.

A typical hardy white H. P. rose. (Courtesy of Ellwanger & Barry.)

will naturalize in a foreign country, but never, I believe, in a foreign zone; a tea rose would never grow wild on the Catskill Mountains. There are about a dozen and a half of species wild and adventive to the various sections of the United States and the natives have several varieties, but only a few garden hybrids, the late John Feast of Baltimore being almost the only person who worked with the prairie roses. Roses are valued for colors, perfume and doubleness. The latter quality is often produced at the expense of stamens, so that fertilization is difficult or impossible with their own pollen. Roses will often flower in climates ill adapted to the perfecting of their seeds. There is a singular story related about the "field" or "Ayrshire" rose, now called *R. repens* again, and found wild in Scotland only in the vicinity of Loudon Castle, to the effect that it was taken there by the Earl of Loudon from America, and that the following lines refer to it:

"The rose of the desert,
So lonely and wild,
On the green leaf of freedom
Its infancy smiled."

This rose (*R. arvensis* as it is best known to English speaking people) is common in the south of Europe and in the south of England, but there is no mention of it in American botanies. The Ayrshires are often good roses for this country* however. Tender climbing roses at the north should be turned under porches, into cellar windows, buried lightly under ground, like raspberries, or well strawed up. They are worth it.



ROSA LAEVIGATA.

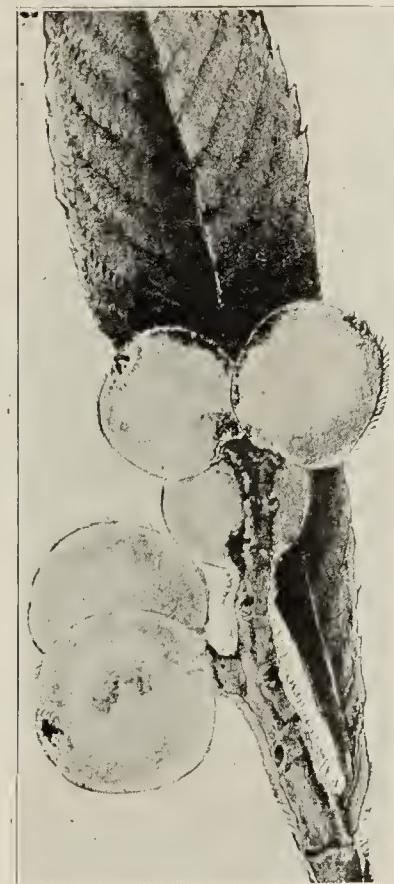
A splendid example of these tender climbing roses is *R. laevigata*, freely naturalized in some parts of the south, and often used for hedges in that section. It is singular how few hybrids have been obtained from this Chinese species.. *R. gigantea* from

the mountainous parts of Burmah is perhaps the largest single rose in existence, with white flowers as large as the smaller varieties of *Magnolia grandiflora*. It has been in European gardens for ten or twelve years past. These two species and *R. sempervirens lechenaultiana* from the mountains of South India are good representatives of the tender species of rose.

The wonderfully mixed roses of our gardens are often impossible of reference to any species, and it is only from a knowledge of their hardihood that they can be guessed at. *R. gallica*, *R. centifolia*, *R. damascena*, etc., have all contributed Hybrids, and natural varieties, some of them perhaps hundreds of years ago before written records were in vogue. I cannot conceive of anything more interesting than the following out of these processes upon the newer species, so well adapted to the various sections of the United States. As an example of what may be accomplished in this direction PARK AND CEMETERY recently figured a group of hybrids of the hardy *Rosa Wichuriana* raised by a former curator of the Cambridge (Mass.) Botanic Garden, W. A. Manda, now of South Orange, N. J.

Cydonia of the *Genera plantarum* has 4 species. This, as I understand it, is made a synonym of *Pyrus* again in some of the later Kew publications. I should really be afraid to say how often its name has been sent back and forth like a shuttle during the last twenty-five years. *C. Japonica* and its pink, white and yellow varieties are among the best flowering shrubs of our gardens, and make excellent hedges. A fruit recently inquired about at the south

ern temperate regions. This number is actually in cultivation, and the varieties are endless. The genus is in several sections, of which the pear, the apple, the rowan trees and the medlar, etc., are representatives. The flowering crabs of various kinds, both native and Asiatic, are among the greatest ornaments of the garden.



FRUIT OF ERIOBOTRYA JAPONICA.
Kew Garden Handbooks, Photinia of the
Genera Plantarum and the dictionaries.

the *Genera Plantarum* was the guide of that great institution in all that pertained to classification and nomenclature. Of course the arboretum lists "must still be regarded as in some sense provisional and open to correction." No doubt the next edition will be revised, or maybe we are going to get a new edition of the *Genera Plantarum* itself.

Cotoneaster has 18 species in northern temperate regions, including the mountains of South India and Mexico. They are naturally evergreens, with small dark foliage and scarlet berries. They are a good deal trained on walls in Europe. In the States such care is rarely taken, and they lose their foliage. The Great Orm's Head is the only locality in which *C. nummularia* has been found wild in Britain.

Crataegus, "hawthorn," has 65 species of generally very handsome low trees and shrubs. They also all belong to the northern hemisphere. There are a few evergreens. *C. pyracantha* is said to have naturalized here and there south of New Jersey. Further north it gets browned sometimes, but forms fine hedges, with bunches of orange-scarlet fruits, on Long Island. The English *C. oxyacantha* has many varieties, all handsome, and several native species with showy scarlet or yellow fruit are more appreciated in Europe than their own country.



PYRUS AUGUSTIFOLIUS.
(Courtesy of Ellwanger & Barry.)

appears to be the fruit of *C. cathayensis* of Hemsliey. The common quince and *C. Maulei* are the other species. All are subject to variation.

Pyrus has about 52 species, all natives of north-

Photinia is a genus of 30 species from California, China and the East Indies. The "loquat," *P. Japonica*, is the plant commonly known as *Eriobotrya*, which affords another example of contradictory naming among the modern Kew hand books and dictionaries. It is hardy far south, but a poor fruit, I think. *P. serrulata*, *P. Benthamiana*, *P. variabilis* and some other Chinese species are good evergreens for mild climates.

Pourtheæa is in 6 or 8 species from the Himalayas and Eastern Asia. *P. arguta* is in European gardens.

Raphiolepis is one of the genera known as "Indian hawthorns." There are five species from Japan, China and the Sandwich Islands. *R. Japonica* is known under several names, but a handsome evergreen shrub, hardy in parts of the United States free from severe frosts.

Stranvæsias are beautiful shrubs in close affinity. They are in six species from the Himalayas, and therefore more "Indian" than the preceding genus. *S. glaucescens* has been in European gardens for three-quarters of a century, but it is tender, scarce and seemingly the only one in cultivation. It would succeed better in the south than in Britain.

Amelanchier has 4 or 5 species from North America, Japan, Asia-minor and Europe. Few plants are loaded with more synonymy. They are commonly called "shad bushes," and are pretty spring flowering dwarf shrubs, or in some forms small trees. It will have been noticed that these genera include all our most important hardy fruits, and it is but natural that plants so widely cultivated should vary as they have done. They are not only the most grateful fruits, but often the most beautiful objects in the gardens of the north temperate zones.

Trenton, N. J.

James MacPherson.

A GLIMPSE AT FINSBURY PARK, LONDON, ENGLAND.

The traveler to England of to-day finds it a very different place from what it was not so many years ago, and especially so in regard to its parks. True, it has had many of them for years, but every year improvements are made in them, and a great deal of care is taken of them, such a boon have they proved to the people. It was my good fortune to visit several of them in London in the summer of 1895, and it gives me pleasure to present herewith two views taken in Finsbury Park, one of the popular ones of that great city. I remember my visit as an exceedingly pleasant one, and, indeed, as the views presented will show, many other besides myself deemed it a most pleasurable resort.

It is really surprising how much these parks are

enjoyed. In week days, especially in the afternoons, it is by no means uncommon to see them crowded, as the picture shows Finsbury Park to have been on this occasion, and on Sundays, the number is easily doubled. I have been in Victoria Park, Portsmouth, on a Sunday, when it was almost impossible to walk around on account of the number of visitors. The visitors, too, are always well dressed, and al-



ways well behaved. It is true, policemen are on hand to keep order, but I never saw the services of one required. Good behavior seemed innate with all that I met with in the many parks I saw.

The picture in which the visitors are shown is adjacent to a large lake, a part of which is shown in the second picture. I think your readers will agree that it is a nice looking assemblage. The seats are well placed in the shade from the trees. It is a mistake to suppose that there is no need of shade in England. The summer of 1895 was a very warm one, and many a time did I take a rest on the grass under some large tree. The English elm is very much used for avenue planting, making excellent shade, while not being too dense, and then it is not of a stiff growth.

In this, as well as all other parks, are recreation grounds for those of all years. The smallest children in charge of nurses or their mothers, are in a part set aside for them. Then larger children have their grounds, boys have ball grounds, and men and women have theirs, and each part is under proper supervision. It does one good to see how popular these places are.

The water scene at Finsbury Park is a particularly lovely one. The cut shows a portion of it, and I think a beautiful part of it. As with all large parks, there is a large lake with boats on it. The sides are heavily planted, as is the island. The willows are not the Babylonian, but one of more upright growth, and which I took to be *Solix Alba*. It is more fitting I think, than the Babylonian in positions such as these seen occupy. The island is

thickly planted with a great variety of trees and shrubs, a variety to make it look as much like a spontaneous growth as possible, and well has the design been carried out. Pleasure seekers are not permitted to land on the Island from their boats,



THE LAKE, TINSBURY PARK, LONDON.

notices posted here and there informing them of the fact. Nothing but water fowl inhabited it so far as I could see.

The flower beds in this and other parks present a charming appearance in the summer season, so many more plants are available than our hot suns will permit. For instance, beds of fuchsias, tall growers in the centre, and a dwarf, Golden Gem, bordering them. Another, fuchsias in the centre, red colored, bordered with white pansies and blue lobelias.

And roses were everywhere, some of them in large clumps and others singly or festooning large shrubs, in a semi-wild state. I saw a large clump of the common day rose in bloom, the plants perhaps 7 feet high, and all as full as they could be of flowers. The scene indeed was so enchanting that as I recall it, I can say with Zelica:

"There's a bower of roses by
Bendemeer's stream,
And the Nightingale sings round
it all the day long:
In the time of my childhood
'twas like a sweet dream,
To sit in the roses and
hear the bird's song:
That bower and its music
I never forget,
But oft when alone, in the
bloom of the year
I think—is the Nightingale
singing there yet?
Are the roses still bright by
the calm Bendemeer,

I think the memory of beautiful scenes lingers long with those who love nature. PARK AND

CEMETERY is doing a good work for our country in its encouragement of those who aim to lay out beautiful grounds, and the lovely pictures of parks and other public places with which it embellishes its pages from time to time, show that we are advancing with rapid pace to take our place alongside of the best of Europe. *Joseph Meehan.*

TRUE OUTLINES IN CURVED DRIVES.

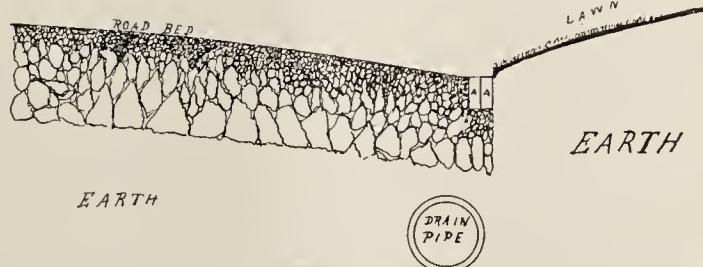
In all modern cemeteries where the curved drive is an essential part to true landscape art it is oftentimes a problem to the superintendent to know how to keep the true outlines of the avenue

The writer has in mind a large cemetery which is considered a well managed place, but if the visitor will look along the borders of the avenue he will find them to have a very unsymmetrical appearance. This, of course, is caused by the men having no guide for the line when trimming with the edging

knives. Where drives are straight it is only necessary to use an ordinary line for a guide. This method can also be applied to curves which are very gradual, using a small portion of the line at a time.

In localities where the soil is a heavy clay loam the difficulty to preserve the outlines will be found much greater than where the soil is of a sandy nature. In heavy soil the frost will raise the border, and in the spring time when the frost is gone the earth will have a tendency to work its way on to the macadam of the road. This naturally gives the grass a chance to take root and overgrow the road.

It is generally conceded that gutters are unsightly and out of place; but if two vitrified or any good hard brick be placed in the gutter line (see accompanying cut A A) they will preserve the out-



line, almost unnoticed, as enough stone will work off the road to wholly or partially cover them. This will make it an easy matter to use the edging knife. But if the macadam is allowed to meet the sod the stone protruding from the road will be found always interfering with the knife.—*Bellett Lawson, Jr.*



A FOLIAGE BED.

A FOLIAGE BED.

The selection and grouping of foliage plants for effective beds in decorative gardening affords excellent practice for the display of taste and the cultivation of harmonious effects. The number and variety of plants useful for this purpose is constantly increasing, and many of the commoner kind, which have been overlooked by reason of their comparative familiarity are now brought into service to add to the richness of the foliage bed.

The accompanying illustration is taken from *Moller's Deutsche Gartner Zeitung*, Erfurt, Germany, and shows a bed of foliage plants, which was created to follow in quick succession a bed of hyacinths, which held possession until the end of April. The hyacinths were then removed, the bed dug over and a strong fertilizer, and well rotted manure and rich soil added to it. The foliage plants were set out early in May and soon made a display continuing throughout the summer until by the end of September the plants in the middle of the group had attained a height of some 14 feet. The bed was star shaped edged with *Pyrethrum parvifolium*, and among other plants in the group are *Achyranthes*

Verschaffelti, *Calladiums*, *Hemp*, *Maize*, *Cannas* and *Ricinus*.

Although a large number of the decorative foliage plants have reached a high state of culture, as well in leaf as in bloom, the field is still very broad for further development both in culture and variety for this class of gardening, and every effort in this direction is worthy of credit.

FROM OUR EXCHANGES.

TREE PLANTING.

It is a gratifying thought that we are more and more becoming a tree-planting nation.

Not many decades ago it could be truly said of Americans, in the words of the Psalmist, "A man was famous according as he had lifted up axes upon the thick tree." To our ancestors the clearing of lands from trees was a necessity; to-day we realize the folly of such a clean sweep, even unto nakedness, as was widely made at their hands. A most wholesome and encouraging reaction is now in evidence, as is manifest in the fact that, according to the last census, more than one billion trees —perhaps fully twenty for every man, woman and child—are being planted every year in the nation. This takes into account only the trees sold from nurseries; add such as are transplanted from the woods and meadows,

and those grown from seed by the people, and the annual output represents a large increase above the number stated.

That we have thus become transformed from a nation of tree-destroyers, to a nation of tree-planters, is an inspiring thought. Do you, reader, belong to this new army of tree planters? If not, we urge you to join ranks and plant a tree or many trees in this month of April. What the aggregate of this work means to our nation, for ages to come, will be to see our homes, highways and landscapes beautified by noble trees; shade and fruit-foods in summer; shelter from the blasts of winter; imparting increased comfort to every living thing, and last but not least, a more equable climate and rainfall.

There is inspiration in the knowledge that judicious tree-planting is work done for the ages. The man who leaves this world, having beautified it with trees to bless those coming after, surely has not lived in vain. Not many of us may be privileged to build enduring monuments of stone, but it is the privilege of each reader of these words to plant a tree or trees, which shall bestow blessing for generations after he has gone.—*Vicks Magazine for April.*

* * *

SUMMER PRUNING OF TREES AND SHRUBS.

With the approach of the spring season, it is well to remind our readers of former reasons given regarding the advantage of summer pruning. If plants could be properly pruned in the summer, they would need but very little pruning in the winter time. In many cases, they would need no pruning at all in winter. All we have to remember is, that by pinching and cutting out very strong and undesirable growths, extra strength is given to the weaker ones. Every observer must have noticed that the strongest growth is always at the top of the plant. The lower branches are always the weakest ones. If we check this strong upper growth, the lower branches gain a strength which would otherwise go to the top. This is the great secret in trimming hedges. This is the great secret in trimming hedges. The general evil in the hedge is, that in the course of time, all the growth is at the top, while the lower portion of the hedge is naked; and thus it ceases to be a pleasure. If such a hedge had been cut at the top early in the season, soon after the young growth was made, the lower portion would be as thick as the upper. Nothing shows better the intelligent skill of the gardener than a hedge which has the lower branches just as densely thick and healthy as the upper ones.

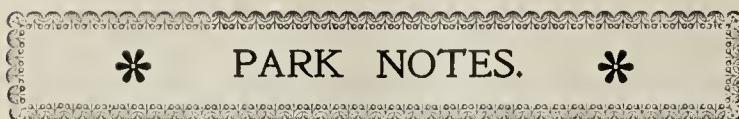
In evergreens, grown as specimen trees on lawns, we find excellent illustrations of this lack of pruning, with all the strong branches at the top, and at the bottom a very few weak ones. The great beauty of evergreens consists in having a good healthy foliage to the ground. The nakedness referred to could have easily been avoided by checking the strong growth at the ends of the branches. The finger and thumb are the only pruning implements required in these cases. Pinching out the ends of the very strong shoots towards the top, when these young growths are from three to four inches

long, is all that is required. Even a leading shoot in a Pine tree may be pinched back at this period, as a new leading bud will be formed at the point where the pinching occurs. A check to the upward flow of the sap is all that is necessary. This lesson may be carried to the orchard, as well as practiced in the flower-garden. No one shoot should be allowed to become more vigorous than another; and pinching back or even taken out entirely, the strong growths, will accomplish this. One must not forget that the phrase "early in the season" means a great deal. Nothing is gained if the work is deferred until the young growth is matured.—*Meehan's Monthly for May.*

* * *

Mr. Westwood has been connected with the gardening department of Forest Hill cemetery for a number of years and his paper was a plain and simple presentation of the results of his experience in cemetery adornment. He referred to the decadence of the ribbon bed, the carpet bed and the foliage bed, and the return of the mixed herbaceous bed to popular favor. He said that the successful modern gardener goes to nature for his ideas and referred to the Arnold Arboretum as a prominent example of the tendencies of the day in garden and park planting. Speaking of the effectiveness of beds of spring flowering bulbs he mentioned Silene pendula as the best ground work to show off the brilliancy of tulips. Cannas, salvias, antirrhinum, ageratum, heliotrope, feverfew, geraniums, stocks and asters, were listed indispensable plants in cemetery work and many of the half hardy shrubs requiring cold frame or pit protection in winter were also recommended as valuable in the composition of ornamental groups. Among the latter were yews, cypresses, sweet bay and aucuba japonica, which may be grouped effectively and if uniformly interspersed with crotons and tuberous begonias, calculated to afford a quiet dignity which contrasts favorably with the old fashioned glaring beds of brilliant flowers or foliage. He mentioned peristrophe as an effective plant to use in combination with crotons. Sub tropical bedding was highly commended and a more general use of musas, colocasias, Dracæna indivisa, eulalias, acalyphas and cannas advocated, with Begonia Vernon and semperflorens for borders or ground work.—Thos. H. Westwood in *The American Florist.*

Mr. Lewis Collins, secretary of the Tree Planting and Fountain Society of Brooklyn, recently addressed a communication to the Department of Agriculture, Washington, on the subject of the effect of electric light on trees, especially in regard to a maple of the variety acer pseudo-platanus. In the course of his reply, Mr. B. T. Galloway, Chief of Division of Vegetable Physiology and Pathology, says: Experiments have shown that unprotected arc lights—that is, lights without a globe around them—are injurious to foliage. This is especially so near the lights, but a simple glass globe has been shown to be sufficient to cut off the injurious rays. I am not aware of any authentic cases of injury from lights so protected.



* PARK NOTES. *

Lima, O., has voted to issue bonds to the amount of \$98,000 for park purposes.

* * *

The citizens of Tifton, Ga., are moving energetically in the matter of town improvement. Committees have been appointed to watch over park interests, railroad depot facilities and such public improvements as water works and lighting.

* * *

The U. S. Senate has agreed to an amendment to the sundry civil bill revoking the forest reservations order, covering seventeen millions acres made by President Cleveland. It will be interesting to know what the House will do.

* * *

The Town Improvement Association, of Montclair, N. Y., held its annual meeting last month. Its agency has been very effective in cleaning the streets and otherwise improving the place, and sometime ago it received a substantial sum of money for the cause in token of appreciation of its services.

* * *

The New York Assembly has passed a bill authorizing the City of Buffalo to issue bonds to provide funds to pay for lands to be acquired for park purposes and the erection of a building thereon to be used by the Buffalo Historical Society. The New York assembly has also passed the bill appropriating \$1,000,000 for the purchase of land in the Adirondack park territory. This is for a further development of a scheme to present to the people certain of the desirable portions of the Adirondacks.

* *

Mrs. Anna May Warrington has presented to the borough of West Chester, Pa., a pretty lot on which there is a fine spring of water, with the understanding that a public fountain is to be erected thereon. In recognition of this generous act Philip Sharpless, an extensive manufacturer, has given \$500 towards providing a suitable fountain for the lot and the necessary balance of money will soon be secured.

* * *

Creston, Ia., took advantage of Arbor Day. Over 1000 trees were planted by its school children, besides a large number of shrubs and ornamental trees. Not only were the school grounds substantially remembered, but in response to the suggestions freely offered by the school authorities, considerable attention was given to home grounds. Altogether the day was a practically useful one.

* * *

It having been decided to transplant a large number of the trees in Paris to the Bois de Boulogne to make room for the exhibition of 1900, it was found that there was no conveyance large enough for the purpose. In consequence of this an immense dray of metal and wood is being built to transport the trees. The dimensions of the truck are colossal, measuring more than 16 feet by 19 feet by 22 feet.

* * *

The foundation stone of a new public library at Edmonton, near London, the gift of Passmore Edwards, editor of the London *Echo*, has been laid, Mrs. Humphrey Ward, the novelist, making the principal speech. The library is to be erected in memory of Charles Lamb and John Keats, both of whom live in Edmonton, the latter writing his first poem there, and the former retiring to its quiet shades in the evening of life, worn out

by the burden of time and his unremitting attentions to his sister. The Last Letters of Elia came from Edmonton.

* * *

The ground for a public park at Bogota, N. J., presented to the borough by Judge Bogert in memory of his daughter who died two years ago, is being improved. The trees and shrubbery were the gift of A. S. Munn, Jr. This memorial is in line with the frequent suggestions offered. No more enduring and at the same time valuable and valued monument could be secured to maintain a memory, than the dedication of a park to the people. It secures its stability as a memorial not only by historical record and association, but also in the material benefits it confers to generation after generation.

* * *

The area of the parks of Brooklyn, N. Y., is 802 acres of which Prospect Park contains 516 acres and cost \$4,000,000 while Central Park, New York City, covers 840 acres and cost some \$15,000,000. Prospect Park has 110 acres of woodland, 77 acres of lakes and water courses, 70 acres of meadows, 259 acres of plantations, nine miles of drives, 3 of bridle paths and 12 of walks. It is proposed this year to greatly improve the Plaza entrance, and to make it the most picturesque portion of the park. A new electric fountain is to take the place of the old one, and at a cost of \$15,000. The estimates this year call for an expenditure of \$650,000.

* * *

The term "tree butcher" which is now being applied quite vigorously in the East to the tree trimmer, is not without cause if the intelligence applied to the work and the reason for it, as recorded in Columbia, Pa., represents prevailing conditions. A committee was appointed to enquire into the ruthless spoliation of the shade trees in Locust Street Park, and the evidence developed that the pay for the work was the wood that was removed, that the trees were to be "trimmed equally," and that the limbs were to be cut off as high as the men could reach. It takes generations for trees to reach perfection, how quickly ruined under such ignorant officialism.

* * *

The Tree Planting and Fountain Society of Brooklyn is exercising an influence far beyond its immediate sphere, its practical work being recognized as worthy of adoption in any city. Its educational work has added to the refinement of the city by inculcating a wider knowledge of the wonders of tree life and its vast importance in the economy of civilization. The Philadelphia *Public Ledger*, suggests that Philadelphia offers a fruitful field for such a society, and that it must be apparent to any one observant enough to note how the street trees are butchered every year under the name of pruning. The paper severely criticises the city forester, and says the condition of the trees in the public squares would not lead anyone to believe in the existence of such an official "or that, if there is one, he is a person to trust private trees to or ask advice of. Tree planting and tree culture in cities is a fine art, and people who appreciate the beauty which trees give to a street would like to see the art encouraged. But the hope that there will be a revival of it in Philadelphia is not seemingly in its city forester, but in an organization patterned after the Brooklyn Tree Planting and Fountain society." Councils' Committee on Police and Prisons agreed to report favorably the bill to prohibit the placing of advertisements on trees without the consent of the owners. A similar bill was defeated in the old Councils because it had inserted in it provisions against the hitching of horses to trees and preventing electric linemen from cutting off branches to permit the stringing of wire. After some discussion these provisions were taken out of the bill. Evidently the Common Council of Philadelphia needs education in some important directions.

CEMETERY NOTES.

The ladies of Enterprise, Fla., have been busy raising funds for improvement of the cemetery. One of their efforts was a palmetto fair, in which brown, green and white palmettoes made a handsome display. The result was \$130. The contemplated improvements are assured.

The Ladies' Cemetery Association of Akron, O., is making a strenuous exertion to add another park to the city. If consummated the main avenue to the cemetery would wind in and out through the proposed park; or in other words it would create a park way to the cemetery.

The Board of Directors' of Bellefontaine Cemetery, St. Louis, Mo., have abolished the \$10 and \$15 classes of single graves and raised the price to \$30, and sectional 10 feet square lots to \$80. Two bodies will not be allowed to be buried in one grave. Another change is that hereafter joint ownership of lots 400 feet square is prohibited.

The Des Moines, Ia., cemetery troubles have finally been adjusted and the Ingersoll tract purchased. An ordinance was prepared providing for a special trust fund for the perpetual care of Woodland cemetery together with the addition of 50 per cent. of the future sales of lots in that cemetery. The ordinance also provides for setting aside 30 per cent. of all sales of lots in the cemetery on the Ingersoll tract as an endowment fund for a like purpose.

One of the bills which passed the House of the Missouri legislature provided that every person, partnership, association or corporation owning any public cemetery shall each year expend a sum equal to one-fourth of the gross proceeds of the sales of lots in improving and beautifying the grounds, and shall also set apart each year one-fourth of the gross proceeds of such sales for a fund, the interest from which is to be used in maintaining the cemetery in proper condition.

The Cypress Hills Cemetery Company, Brooklyn, N. Y., has been sued for \$10,000 damages for injury from poison ivy growing on a grave. A widow who claims to have paid a monthly rate for care of her husband's grave, on one occasion found it in a very untidy condition and taking off her gloves proceeded to clean up. In doing this she was badly poisoned, resulting in long illness and disfigurement and loss of a good position by which she supported herself and young daughter. The trial resulted in a verdict for plaintiff for \$3,500.

The annual report of the superintendent, of Calvary cemetery, St. Louis, Mo., gives: Receipts from sales of lots, \$28,975. The number of lots sold during the year were 325 making the total sold to date 10,140. The total number of interments for the year were 2,493 which gives a total for the cemetery of 60,-519. Nearly half a mile of new roadway was completed and some 4,500 forest trees and evergreens were planted out in the new grounds. Another great step in progress was made in new rules passed by the Board of Trustees, which prohibited stone entrance steps to lots, and provides that no corner stones shall be set above the surface and no headstones higher than the graves in the new part of the cemetery.

Lake Park Cemetery, Swedesboro, Gloucester Co., N. J., is a small tract of 25 acres purchased in 1892. It is beautifully lo-

cated, 100 feet above tide water and 70 feet above Lake Naraticon which bounds two sides of it. It has been laid out with a view to landscape effects. The main avenues are 20 feet wide, cross avenues 8 feet, and walks 5 feet. The lots range in size from 75 to 288 square feet. The sections are graded for lawns with grass paths. A fund for the permanent care of the cemetery is being provided by setting apart ten per cent. of all lot sales. The management is vested in a board of managers, chosen annually, who elect officers and an executive committee which in turn elects the superintendent.

The rule recently adopted by the Woodlawn Cemetery Association, Winona, Minn., of closing the gate at sunset is causing considerable dissatisfaction. This is the universal practice in cemeteries managed with a view to proper care and improvement. While it may seem arbitrary to close the gates of a beautiful cemetery at a pleasant time of day, to maintain it in a condition of beauty requires constant care and watchfulness, and the gates being left open until dark would necessitate that the officials and help should also remain on duty. This would be a great hardship on the superintendent and his assistants, would ultimately entail a larger force, and would add to the cost of maintenance in an unnecessary way, considering the results. A little education on the point should be convincing to the community.

The Erie Cemetery Corporation, Erie, Pa., one of the few cemeteries whose superintendent is a woman, Mrs. E. E. Hay, held its annual meeting on May 4th. During their past year four members of the organization passed away, including two of the original corporators. The new lodge and entrance, constructed of Medina stone, is about complete. The building includes large reception and retiring rooms, superintendent's office, secretary's office and vault. A large amount of improvement work was carried out. The number of interments during the year was 391. Amount received for care of lots and miscellaneous work, \$2,565.27. Among receipts are: Making graves \$1799.50; sales of lots \$7,836.78. The amount expended on building and entrance gates was \$18,694.10. Receipts from all sources during year were \$17,765.01.

The annual meeting of the proprietors of lots of the Rural Cemetery, St. John, N. B., was held last month. The report of the directors for their past year shows that perpetual care is gaining ground, the number of lots placed under its provisions having largely increased, and another great improvement was the removing of iron fences and stone copings, carried out by permission of interested lot-owners, rather than by enforcement of prerogative. A large number of trees were imported and set out and much material improvement carried on. The financial report showed receipts from sales of lots \$1448.50 a decrease of over 50 per cent. on sales for previous year; burial and vault fees \$1168.80 also a decrease, while the annual care of lots reached \$2338.90 as against \$1783.90 in 1895. The fund for perpetual care of lots amounts to \$6,095.29, covering 66 lots, 30 of which are credited to last year. The directors are on record as discouraging Sunday funerals.

The annual meeting of the Marion, O., Cemetery Association was held April 12th, and while the receipts from sales were less than the previous year, the condition of affairs is very gratifying. The total receipts were \$6,002.81 and expenditures \$3,640.08. The association has available assets of \$25,026.31. The lot endowment fund amounts to \$9,678.94. The association has been in existence 40 years and as Mr. P. O. Sharpless, a trustee, says in a communication, the condition of affairs is no

more than may be done in any city of 18,000, "where you can find a few persons willing to sacrifice a little time without pay. For instance, I have been trustee for 32 years, Mr. Crawford 30 years, A. H. Kling, 25 years. I find it takes some years to become fully familiar with cemetery work, and very good results will not follow frequent changes in officers or superintendent. We are a close corporation, so we fully control the whole thing; first show the people that you are in for beautifying the City of the Dead, and they will be with you sure."

* * *

At the annual meeting of the lot-holders, of Magnolia Cemetery, Charleston, S. C., on May 4th. Mr. Geo. W. Williams, chairman, made his 39th annual report. The receipts from sales of lots the past year were \$3,383.55. The fund for the care of grounds, roads and lakes amounts to \$35,423; the permanent fund to insure the perpetuity of the cemetery is now \$36,850.00 and the perpetual care fund \$26,300. The sale of lots in this cemetery since its organization in 1850 amounts to \$177,115.55, and the proprietors have expended over \$100,000 in making Magnolia a beautiful cemetery. A pointed suggestion is conveyed in the report of the Trustees on Perpetual Care; it says: "It would certainly be better for lot holders before erecting expensive monuments to provide a fund for the perpetual care of their lots." Magnolia cemetery is gradually coming to maintain stricter rules for its care and development, such as have been found necessary in other progressive cemeteries. The cemetery was never in better condition than at present.

Correspondence.

Politics in the Parks.

Editor Park and Cemetery.

SIR:—The following anent the Chicago Parks is from *The American Florist*.

"The West Park Commissioners have elected Wm. J. Cooke general superintendent of the West Park system. Previous to this time Mr. Cooke had been sergeant at-arms of the city council, and his studies in this great horticultural school must have made him peculiarly available. It is said that he can graft a slate on to a primary with finished skill and in the propagation of votes has produced some very interesting hybrids."

"The new superintendent of Garfield Park is Mr. Hugh Ward, reported in the daily press to have been a lodging house keeper prior to his appointment. Probably he also knows something about the propagation of votes, the atmosphere of lodging houses being said to be remarkably favorable to the process."

"Mr. James Jenson was retained as superintendent of Humboldt Park, much to the surprise of all. The supply of lodging house and saloon keepers must have given out. The head gardeners were retained at each park. The board seems to generously admit that there should be some one at each park who knows the difference between a geranium and an elm tree. This magnanimous concession is much appreciated by the people."

"The Lincoln Park board has not yet reorganized. It is reported that a livery stable keeper, prominent in political circles, is the leading candidate for the position of superintendent."

A Mr. Stewart is reported later, as resigning his appointment as a commissioner on the Lincoln Park board, it is not said whether from conscientious scruples.

Mr. Grant writes me that a paper on this subject is to be read at the next meeting of the Chicago Horticultural Society, and that the correspondents of the daily press are to be invited.

I cannot conceive what kind of gardeners accept positions with these worthies? Surely they are becoming more and more hopeless.

Why don't the politicians scoop in the Hospitals? Are they afraid the doctors would kick? 'Base Turks' not they! Never

theless, I only know of one or two instances where it has been done.

A public so depraved, so ignorant, so steeped in indifference, deserve all they get, and are bound to get.

J. MacP.

* * *

Editor Park and Cemetery.

BROOKLYN, May 1, 1897.

DEAR SIR:—Will you please answer in your next issue the following: 1. If a person dies making no mention of his burial lot in his will, but wills *all his real and personal estate* to John Doe, does the lot go to the heirs of the testator or to John Doe? 2. Must the lot be mentioned in the will? 3. Has an executor the right to order interments and restrict burials in said lot to certain persons.

A SUBSCRIBER.

[1. To the heirs. 2. No. 3. No.] These would appear to be the correct answers under the New York law so far as direct answers are possible. But there are certain provisions of section 49, article 3, chapter 559 of the laws of New York of 1895 relating to corporations, or rather cemetery corporations, which should be borne in mind as somewhat qualifying the foregoing. They are as follows: "All lots, plats or parts thereof, the use of which has been so conveyed as a separate lot, shall be indivisible, except with the consent of the lot owner and the corporation, and the use of the same for burial purposes after a burial therein shall be inalienable and be held in perpetuity by the grantee and his heirs, except as otherwise provided in this section; and on the death of the grantee shall descend to his heirs at law, or to such of them, or to such other person or persons, or to such other class or classes of persons as may be designated in such conveyance." "An heir may release to the other heirs, and a joint owner may release to other joint owners his interest therein on conditions specified in the release, which shall be filed in the office of the corporation." "If no burial be made in any such lot, or if all the dead bodies therein be lawfully removed therefrom the owners thereof may, with the consent of the corporation, sell the use of such lot." "A lot owner may reconvey or devise to the corporation his right and title in and to any lot theretofore conveyed to him by such corporation."]

* * *

Some General Questions.

OTTAWA, CANADA, March 4, 1897.

Editor Park and Cemetery,

DEAR SIR:—Perhaps you would be pleased through the medium of PARK AND CEMETERY to express your views on the following:

1. What proportion of cemeteries prohibit Sunday burials excepting, of course, interments because of infectious diseases?
2. Is it customary in any of the larger cemeteries to permit the transfer or removal of remains of dead from contagious *diseases*?
3. What proportion of cemeteries permit visitors to enter the grounds on horseback?
4. What proportion of cemeteries permit visitors to enter on bicycles?
5. Do the officials and workmen in some cemeteries use "wheels" in the performance of their duties?
6. What is the best method of regulating or preventing injury to grass, shrubs and trees by horses and obtaining redress therefor? We observe the rules and regulations of different cemeteries in this regard are simple and ought to be effective, but in practice we find them complex and inadequate.
7. Is the "keep moving" policy the rule with regard to visitors in American cemeteries, or what is the prevailing custom in regard to seats for rest?
8. Have most of the American cemeteries regularly arranged toilet accommodations for ladies and gentlemen, and what sort of surveillance over the same is generally maintained?
9. Do the larger American cemeteries have many visitors in the long summer evenings, or is it the practice to close the gates at sun down?

10. Would it be profitable to invite comment in PARK AND CEMETERY on the advisability of permitting electric cars to enter cemeteries of large area, of course, under restrictions as to becoming decorum? Are there any such instances already in American cemeteries, and what is the experience therewith?

John C. Gordon, Supt. Beechwood Cemetery.

In the space at command it would be impossible to do justice to the queries of our correspondent, but the following will, to some extent, satisfy the questions.

1. Comparatively few cemeteries have up to date made prohibitory rules, but the subject is now receiving vigorous attention among both cemetery officials and the clergy, and Sunday funerals are rapidly becoming less frequent.
2. Some States have laws forbidding the exhuming of the remains of those dying from contagious diseases; others prescribe rules and directions to be followed, and it may generally be said that the health officers throughout the country exercise a paramount authority on the question, with penalties for infraction of orders. But cemetery officials have recognized the importance of care, and custom has established rules harmonizing with the demands of the local health authorities.
3. No information is at hand of any cemetery prohibiting the entrance of equestrian visitors. The rules and regulations govern their conduct.
4. At the last convention of the Association of American Cemetery Superintendents, held at St. Louis, Mo., in September, the question of admitting bicycles to cemetery grounds was discussed and put to vote, resulting in a strong majority in favor of the wheel.
5. The bicycle has been found a valuable aid to the superintendent and other officials in cemetery work, and is used to a considerable extent.
6. The rules and regulations of all properly managed cemeteries govern the question of injury by man or beasts and have generally been found to be effective where strictly enforced. Drivers and others against whom charges of injury are brought are, until satisfaction and recompense are arranged, forever prohibited from again entering the grounds, besides the penalties which common law provides for such cases.
7. This query touches a subject to which far too little attention has been paid by cemetery organizations. Many of the larger cemeteries have provided shelter houses, and to some extent seats, but PARK AND CEMETERY has frequently suggested that more accommodations in this direction should be provided, and indeed improvements are advancing on this line.
8. The answer to question 7 will apply to this. Both in parks and cemeteries the authorities are behind the times in such matters of public comfort. The necessity and appropriateness of such provisions are beyond question, and generally speaking it is surprising that so little attention has been paid to the subject. We are rapidly progressing, however, and buildings of public comfort are becoming features of the architectural plans of our parks, just as shelter houses are being provided in our cemeteries.
9. The gates of American cemeteries are closed at sundown. The reasons from the cemetery official's standpoint are undoubtedly apparent to our correspondent.
10. The columns of PARK AND CEMETERY are always open for the discussion of progressive ideas, but present indications do not point to the advisability of admitting public car tracks on to cemetery grounds. In most of our large cities the street car companies have tracks extending to the principal cemeteries, while many of them use special cars for funeral purposes. Arriving at the entrance gates the cemetery corporations provide suitable transfer vehicles. Some of our larger cemeteries run horse vehicles at stated intervals covering the principal points of their grounds, charging a regular fare for the trip.—EDS.

LEGAL.

CEMETERY ORGANIZATION LEGALIZED.

The Indiana statute authorizing the appropriation of real estate for cemetery purposes has been amended by act approved March 8, 1897, which adds to it that "It is provided that where any cemetery society has heretofore regularly caused its articles of association to be recorded in either the miscellaneous, mort-

gage or deed records of its county such organization is hereby legalized."

* * *

The following law, which explains itself, has been passed by the Massachusetts Legislature:

"SECTION 1. Executors or administrators may pay to cemetery corporations or to cities or towns having burial places therein a reasonable sum of money for the perpetual care of the lot in which the body of their testate or intestate is buried. The probate court shall determine, after notice to all parties in interest, to whom the same shall be paid and the amount thereof, and such sum shall be allowed in final accounts of such executors or administrators.

"SEC. 2. This act shall take effect upon its passage. Approved April 29, 1897."

CEMETERY LAND LAW.

Several points of interest to cemetery associations have just been decided by the supreme judicial court of Massachusetts, in the case of Packard v. Old Colony R. Co. Here it was contended that a deed to three persons named, and described as "a committee of and in behalf of Village Cemetery, a corporation," of North Bridgewater, was ineffectual. On its face, the deed showed a clear intention that the estate granted should not be limited to the lives of those three persons, though it neither contained the words "in trust" nor the word "trustees," the evident purpose being that the land granted should be used for burial purposes by the corporation called the Village Cemetery. Under these circumstances, the court holds that the deed must be construed as a deed in trust for that corporation, and, as the purposes of the trust required a legal estate in the trustees for a period beyond their own lives, they would take the complete legal title, though no words of limitation to heirs were used. Then, it was contended that the deed failed, because the Village Cemetery was never legally organized as a corporation. But while the court thinks there was sufficient evidence of its legal organization, it makes the important declaration that there could be no doubt that the Village Cemetery was a corporation *de facto*, or what assumed to act as a corporation, and as the grantor in the deed acted on the assumption that it was a corporation, and so described it, and received money which probably came from its funds as the consideration of the deed, it was at least doubtful if it was then open to the grantor's heirs to deny the due and legal organization of the Village Cemetery as a corporation.

EXECUTOR ALONE LIABLE FOR MONUMENT.

A contract for the erection of a monument for an estate purported to bind the executor personally. The offer made in the first place was personal, and his acceptance was personal. The words "for the estate of California A. Davol," following the words, "I agree to build for you," the supreme judicial court of Massachusetts declares, only identified the subject-matter of the contract. Durkin v. Langley, 46 N. E. Rep. 119. Besides, it says that the general rule of the common law is that an executor cannot bind himself in a representative capacity by a new express contract. He binds himself personally, if at all. Taking these considerations together, it holds that the contract in question only created a personal liability on the part of the executor, and that it should not be enforced against the estate. Nor does it consider that it is rendered otherwise by the Massachusetts statute which authorizes the probate court to allow a reasonable sum for a monument when the same has been expended by the executor or administrator. This statute, it insists, cannot be held by implication to authorize an express contract binding the estate further than in terms it authorizes an allowance to the executor. How far it does so under the particular circumstances the plaintiff must find out at his peril. In this case, it further holds, no allowance out of the general assets would be reasonable, because the testatrix gave a fund specially for the purpose which came to the hands of the executor. The suggestion is also made in this case, that it is doubtful whether a promise to pay for a suitable monument ever would be implied by law.

Association of American Cemetery Superintendents.

G. W. CREESY, "Harmony Grove," Salem, Mass., President.
ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., Vice-President.
F. EURICH, Woodlawn, Toledo, O., Secretary and Treasurer.

The Eleventh Annual Convention will be held at Cincinnati, O., Sept. 14, 15, 16 and 17.

Publishers' Department

Park Commissioners and Cemetery trustees are requested to send us copies of their reports.

Photographs and descriptive sketches of interesting features in parks and cemeteries are solicited from our readers.

The American Association of Nurserymen will this year hold their annual convention at St. Louis, on June 9, 10. The convention will be entertained on the evening of the 10th. at the banquet provided by the Shaw bequest, for which invitations have been issued by Prof. Trelease.

At the next meeting of the Horticultural Society of Chicago, Mr. O. C. Simonds, landscape gardener and superintendent of Graceland Cemetery, Chicago, will read a paper on: "What are the essential qualifications of the ideal park superintendent, and what are their relative importance." It is expected that the public press may be induced to fully report the paper and the discussion, so that the people may be informed on the importance of many features of the subject both to their pleasure and welfare.

Mr. F. W. Higgins, superintendent of Woodmere Cemetery, Woodmere, Mich., desires to return his thanks to his fellow superintendents for their kindness in complying with his request for illustrations and details of cemetery entrances, and furthermore for their kindly sympathy in his misfortune of losing the home, by the fire which occurred at the cemetery on April 3rd. Plans have been prepared for a new entrance building and superintendent's residence, to be completed this summer.

Mr. J. G. Jack has been conducting a series of lectures and field meetings at the Arnold Arboretum for the purpose of giving instruction in a popular form concerning the trees and shrubs of New England. The course began on May 1st. and will close June 19th. The class assembles each day in the lecture room of the Bussey institution, where a review is given of certain groups of trees and shrubs, and then adjourns to the arboretum for an informal out-door study of the plants.

Mrs. M. G. Van Rensselaer discusses some of the essential truths of landscape art in the exquisitely illustrated article on Prof. Sargent's country home, near Boston, in the May number of the *Century Magazine*. The concluding paragraph sums up the breadth and requirement of this alluring subject. "Landscape gardening is a genuine art, an independent art, a very difficult art, and one which demands much knowledge of other than artistic kinds. No superficial amateur, and no professional man of one-sided training, can create a really fine country place of a highly civilized and polished sort, perfectly adapted to the needs and tastes of its owners entirely appropriate to its situation, completely realizing the natural possibilities of its site, displaying the full resources of modern horticulture, delighting the eye with pictures of the most diverse kinds, and satisfying it by their combination into a harmonious whole. The genesis of a country place like Holm Lea requires the mind of a practised horticulturist, the heart of a lover of nature, the eye of a trained artist—and, besides all these, the beautiful patience of Job."

RECEIVED.

CORNELL UNIVERSITY AGRICULTURAL EXPERIMENT STATION, ITHACA, N. Y.
Bulletin 129. February 1897. Chemical Division. How to conduct Field Experiments with Fertilizers. By G. C. Caldwell.

Bulletin 130. March 1897. Agricultural Division. Potato Culture. By J. P. Roberts and L. A. Clinton.

MAINE STATE COLLEGE AGRICULTURAL EXPERIMENT STATION. ORONO, ME.
Reports for the years 1888-1895 inclusive. Eight volumes.

Woodlawn Cemetery, New York, Annual Report to the Lot-owners for the year 1896, with Rules, Regulations, etc. Illustrated with half tone engravings.

Annual Report of the Trustees to Lot-owners of Riverside Cemetery, Rochester, N. Y., with Revised Rules and Regulations, adopted 1897. Illustrated with half tones and map.

Lakewood Cemetery Association Annual, 1897.

Annual Report of the Commissioner of Parks, City of Brooklyn, New York, 1896. A beautifully illustrated report in book form.

St. John Rural Cemetery, St. John, N. B. Report of the Directors of the Company presented at the Annual Meeting held April 5, 1897, including reports of Treasurer and Superintendent.

Fifty-Fifth Annual Report of the business of Lowell Cemetery to the Proprietors, 1897. Lowell, Mass.

Second Annual Report, Board of Public Works, City of Little Falls, N. Y., 1896.

The Cremation Society of England. A description with illustrations. London, 1897.

ART OUT-OF-DOORS, HINTS ON GOOD TASTE IN GARDENING. By Mrs. Schuyler Van Rensselaer, New York. Charles Scribner's Sons, 1897.

To those imbued with the love of the beautiful, at least as it relates more specifically to nature and her wonderful revelations, the writings of Mrs. Van Rensselaer must always be attractive. Her evident sympathy with all natural beauty, coupled with a wealth of knowledge imbibed from constant study and association with nature herself, and a facile pen to impart to her readers whatever of her knowledge and ideas she desires them to consider, makes her writings of peculiar interest. Moreover she makes herself a seer concerning the era of landscape work and home improvement now approaching, with the rapidity with which a well defined progress sweeps over our national life.

"Art-of-doors" makes delightful reading for the dilettante; for one interested in landscape art it is full of suggestive information, and no one will put down the book without being impressed with the fact that landscape gardening in its proper sense is indeed art, requiring profound knowledge, close acquaintance with nature and a refined sense of beauty, varied in expression countless times.

THE AMERICAN WOODS, Exhibited by Actual Specimens and with Copious Explanatory Text, by Romeyn B. Hough, B. A. Part I. Representing Twenty-five Species by Twenty-six Sections. Second Edition. Lowville, N. Y., U. S. A. Published and Sections Prepared by the Author. 1893.

For a study of American trees this book would be unique, for its explanatory text, glossary and descriptive matter, introducing the main feature of the work, the actual mounted sections of the wood, rounds out the subject in an interesting manner. The wood sections are mounted three on a card, and give transverse, radial and tangential sections, and the cards bear the botanical and common names in several languages. This method of treating the subject is not only exceedingly valuable as tending to inculcate a better knowledge, but it is also an object lesson leading to a wider and more positive acquaintance with trees and their uses.

A Kansas City man recently died, leaving a will, but not a dollar's worth of property was found. It was Rabelais who left the following "last will and testament," which will forever stand alone in its way: "In the name of God, amen. I have nothing. I owe much. I give the rest to the poor."—*Kansas City Star*.

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CONTENTS.

EDITORIAL—CEMETERY IMPROVEMENT—LOUISVILLE CONVENTION OF THE PARK AND OUT-DOOR ART ASSOCIATION—ART COMMISSIONS.....	73
VILLAGE IMPROVEMENT.....	74
LOUISVILLE MEETING OF THE PARK AND OUT-DOOR ART ASSOCIATION.....	75
PARK DESIGN AND PARK PLANTING.....	75
*SOME NOTABLE PUBLIC MONUMENTS UNVEILED.....	78
*GATEWAY AND OFFICE, WOODMERE CEMETERY, WOODMERE, MICH.....	80
SOME EARLY HISTORY OF THE PARKS OF NEW YORK.....	80
*CYPRESS LAWN CEMETERY, SAN METEO CO., CAL.....	82
*HERBACEOUS PÆONIES.....	84
AN IDEAL SPOT	84
*GARDEN PLANTS—THEIR GEOGRAPHY—XIX	86
*PRINCE HENRY OF BATTENBERG'S TOMB.....	88
MICHIGAN'S EARLY WILD FLOWERS.....	89
THE TWO FOUNDERS OF MODERN GARDENING.....	90
LAWN WEEDS.....	92
*COLUMBIARIUM, SAN FRANCISCO, CAL.....	93
*PLAZA, ALAMEDA AND PASEO IN THE CITY OF MEXICO, II.....	93
PARK NOTES.....	95
CEMETERY NOTES.....	96
CORRESPONDENCE—LEGAL	97
PUBLISHERS' DEPARTMENT.....	98

*Illustrated.

IT is very gratifying to note the rapidly increasing desire to transform the old time cemetery into something approaching the newer ideas of the present day. The work of educating the community into such a condition of mind is a matter of time, but it is sure to take effect sooner or later, and when once its influence is felt rapid progress is made. Nothing is more helpful in healthy rural life than the Village Improvement Society, and every community which has intelligence enough to serve its best interests should organize such a society. The matters that come before it are questions of life and health, to say nothing of comfort, and moreover for the most part are interesting, and well worth the consideration of every one. With such a society the improvement of the cemetery presents itself as a necessity, and one season can be made to present such changes that interest will surely follow and ensure permanent results.

IT may be confidently expected that the Park and Outdoor Art Association which was organized in Louisville, Ky., on May 21, is not only an effective step in the direction of more and better parks but in the general improvement of the out-of-door conditions of our homes both in town and country. It will be the means not only of impressing the people with the importance and high character of the work connected with the establishment and development of the park, but it will educate them in art out-of-doors, and open to them a limitless field of contemplation, the reducing of which to a practical home adornment will tend to create a new view of life. For some time past there has been under consideration the formation of an association of men educated in landscape work, after the manner of existing professional bodies, but the late lamented Charles Eliot, discussing the subject, suggested that an association should be formed on a broader base "A general association to be made up of all who desire the advancement of 'Art Out-of-doors,' including amateurs, land-owners, writers, park commissioners and officers, village improvement societies, foresters, gardeners and others interested. An organization corresponding somewhat to the American Association for the Advancement of Science." That the time was ripe for the organization of such an association was evidenced by the business vim which characterized the proceedings, and the fact that the suggestions for further delay to perfect details were over-ruled. A permanent organization was effected, officers elected and committees appointed for the work to be accomplished in preparation for the next meeting to be held in Minneapolis, Minn., June 22, 1898. The interests which such an association will promote are of vital importance, so closely connected is its work with the community, individually and collectively; and its organization effected on such broad lines opens its educational influences to any one desirous of promoting its objects and at nominal expense. It may be made to establish on a permanent basis the profession of the landscape architect or landscape gardener, or whatever term may be finally adopted, and at the same time bring the profession into immediate contact with an intelligent clientele, wherein an inter change of thoughts and ideas will be mutually beneficial.

THE cause of good art is one of the most important questions facing the people to-day, because it is not only involved in the degree of national taste and enlightenment, but it is in large

measure the criterion of our civilization. It is sincerely to be hoped that the commercial spirit which has hitherto practically adjudged the value of everything coming within its influence, has concluded that the value of art to a people cannot be fixed by dollars and cents, any more than any other agency of higher thought and purpose. The time is ripe for a more enlightened consideration of the subject, and that the government itself should be in active sympathy with the cause, not only for the abstract good of the people which of course should be paramount, but from the fact that it annually expends a large sum of money on art and artistic structures, without any responsibility as to the artistic value of what it receives in return, and carried out in a manner open to severe criticism, if not censure. The National Art League is making a gallant effort to increase its influence and gain the confidence of the people, and its objects are worthy the support of every thinking citizen. It is moving to obtain strength and backing enough to make an effectual appeal to congress to create an expert art commission to which all questions of public art should be submitted and whose decision would be final. In matters where awards are to be made the responsibility would lie with the commission, and the public having confidence in expert conclusions would uphold such decisions. This would lead to more active recognition by the government of American Art and artists, making it more desirable to work at home than abroad, because of its intelligent appreciation, superinduced by well ordered government methods. A sculptor or painter of genius in the enlightened European nations is sure of recognition by his government as soon as his ability pronounces itself, and his position is secure in public estimation so long as his work maintains its standard of excellence, and without the carping criticism of irresponsible journalism. Effort in this direction is bearing fruit, for a bill has been introduced at Washington for the creation of an art commission to consist of five persons, citizens of the United States, distinguished in literature and fine arts, to be appointed by the president with the consent of the Senate. It would be the duty of this commission to meet semi-annually in the city for the purpose of examining the art collection in the Capitol and the Library, to examine all works of art offered for sale or as a donation for use in either building, and to make an annual report to the President and to the two Houses of Congress.

VILLAGE IMPROVEMENT.

On a former occasion PARK AND CEMETERY gave a few brief hints upon the improvement of villages—and their material welfare founded upon the

continuous industry of their inhabitants.

There are, as was then intimated, many villages in this country whose people are fully occupied both in summer and winter, and if the occupation be at all profitable there will always be a proportion of the inhabitants who will desire to make the fact apparent. How can they do so? It may be done in very many ways, but the very best and most economical way will be to plant something with knowledge and taste.

If a wealthy person starts in to build a model village as the Pullmans have done in this country, and as the Ingoldsby's have done at Ripley Castle, and the Prince of Wales at Sandringham in England, they will probably create a beautiful harmony in architecture and good roads, sure to be embellished in England at any rate with a great deal of tasty planting.

Such conditions rarely occur anywhere. Villages and towns are commonly aggregations of individuals who do as they please, and make or mar as their taste or inclination, or their want of taste, dictates.

Very often a native grove or a paddock with a row of cottonwoods around it is all they can either afford or appreciate.

On the other hand are communities of considerable wealth and even culture, both desirous and willing to do any reasonable thing to make their place of residence attractive. To such good roads, neat fences, (if any), and the utmost embellishment that grass and trees and flowering plants can afford will commend themselves. If they can afford something in a park, or garden, or cemetery, which not only in its inception, but in its progressive development and keeping will be a guide and stimulus to them and the surrounding country, so much the better. Sometimes wealthy citizens donate land for such purposes, and the question becomes a perplexing one as to what is best to do with it. There will always be a great many advisors of greater or lesser competence. Some will be architects who can easily spend a great deal of money that will affect something to be seen; some will be engineers who can easily spend a great deal, the results of which can neither be seen nor appreciated, and the very person who can best embellish and redeem their combined works from barrenness, may never be consulted at all, or very tardily. There are a number of people who spend more on a minute survey, than would effect the whole necessary improvements, and never get a step beyond their paper work—or if they do they speedily find themselves in financial straits. Evidences of this may be seen even in the largest cities, where unkempt roads and "paths for equestrians" are common features. In numbers

of cases they are never used and need never have been built. Trees and shrubs would generally rather grow where the surfaces are undisturbed; if they need disturbance and "making," such lands are most costly and undesirable for public grounds. Operations of the kind are only pardonable where some overcrowded community exists which from its foundation has been destitute of foresight, or where some nuisance needs abatement. The selection of grounds in country communities are frequently most extraordinary and unhappy, and give evidence of downright jobbery. Bridges are built across little dells and bogs when a road beside them would be adopted by everybody but the architects, and roads and paths are constructed by the mile which require a good sized police force to keep people upon them. Such work is worse than waste and is not advocated by people of sense. Roads are never beautiful in themselves. However well they are kept, however necessary they may be, they are but barren strips. Yet their convolutions and twisting on a piece of paper is often the sole thing that is either admired or understood. Some of the best taste that has ever been lavished on the ground was conveyed to it direct from the artist's mind. A landscape gardener who is master of his material and his ideas, no more needs a plan to aid him in conveying them to the ground than a great painter needs a plan for a series of landscapes. If the work is to be delegated, it is of course another matter, but the gardener who loves his work and pursues it for other than mere money, is only too well aware that his most subtle touches can never be delegated, on any but the most pigmy scale. Others may profess to comprehend his directions and his compositions, but it never happens that they arrange material as he himself would do. For this reason chiefly the best work of the world has been and is done under the direct, almost despotic supervision of the gardener, whether with or without the intervention of paper plans is immaterial.

THE LOUISVILLE MEETING OF THE PARK AND OUT-DOOR ART ASSOCIATION.

The Louisville Board of Park Commissioners sent out an invitation to park commissioners, park architects and park engineers of the United States to meet in Louisville on the 20th and 21st of May for the purpose of discussing matters pertaining to the development and construction of pleasure grounds for the people. The invitation was accepted by delegates from thirteen states and immediately resulted in the formation of an organization founded on lines suggested in a letter from Mr. Charles Eliot shortly before his death.

Mr. John B. Castleman, President of the Louisville Board of Park Commissioners was made Pres-

ident, L. E. Holden of the Cleveland Board of Park Commissioners, Vice President, and Warren H. Manning, Landscape Architect, Boston, Mass., Secretary and Treasurer. A committee was appointed to present a constitution and by-laws at the next meeting which is to be held at Minneapolis, June 23rd, 1898. It was voted to make the annual dues \$2.00 a year. The following papers were read:

"The True Purpose of a Large Public Park" by John C. Olmsted, Brookline, Mass.—"The Use and Management of Public Parks by Col. Andrew Cowan, Louisville, Ky.—"Water Garden Decoration" by James Gurney of St. Louis, Mo.—"Parks and Municipal Art" by Harry W. Jones, of Minneapolis, Minn.—"Rural Parks in a Prairie State," by Thos. H. MacBride, of Iowa City, Iowa.—"Park Planting" by Wm. S. Egerton, of Albany, N. Y.—"The Value of Parks as Investments and Educators" by L. E. Holden, of Cleveland, Ohio.—"The Metropolitan Park System of Boston" by W. T. Pierce, of Boston, Mass.—"Park Design and Park Planting" by Warren H. Manning, of Boston, Mass.

M. L. Johnson, of New Orleans, read an interesting history of the park development in his city and Mr. Egerton gave a brief outline of the classifications and duties of a park superintendent.

The visitors to the meeting were tendered a banquet by the park commissioners and citizens of Louisville, and they were also given an opportunity to examine the park system.

PARK DESIGN AND PARK PLANTING.

The following paper was read by Mr. Warren H. Manning, landscape architect, at the convention of the Park and Out-Door Art Association:

When land is selected for park purposes, it should be done with a view to developing for a town or city a park system in which provision can be made for different forms of recreation for different pieces of ground, each piece being specially adapted to the purpose for which it is to be used and all so situated that they can be linked together by carriage ways, foot ways or water ways, and in this selection topographical features or existing vegetation, rather than property lines, should determine boundaries. A skillful park designer, in making such a selection, will almost intuitively catch upon the leading expression of each tract and outline in his mind a plan for its proper development almost as soon as he has become thoroughly familiar wth it and thus decide quite definitely as to boundaries at an early period.

Park designing is a creative art requiring a high degree of intelligence, cultivated common sense, a great fund of practical information, keen powers of observation and inborn good taste to enable the designer to perceive the leading expression and to design a plan that will meet all the practical requirements of the problem economically and conveniently and produce a final result that will be a picture harmonious in all its details. A skillful park designer is not an engineer, an architect a gardener, a geologist or a botanist, but he must have a general knowledge of all these and other callings in

order to know when to call in such expert advice and assistance at the proper time, and how to co-operate with it successfully. He must also have an intimate knowledge of the material and processes required to execute his designs and the ability to express the results of his thought and study by means of plans, diagrams and instructions, so that those who are actually responsible for the work of construction can interpret them properly. After his design is laid out upon the ground he should continue to have a general oversight over this work because its full development can only come through years of growth, and it may be wholly defeated, particularly during its early stages, by accidents or by additions and changes made by those whose experience does not enable them to fully appreciate the original intention. Without such a general oversight, a full measure of success is seldom obtained.

This brief reference to park design and park designers will, I hope, give an adequate idea of the character of the problems presented and of the qualifications required in the work in question. In all this study the question of planting cannot be lost sight of. The character of the native growth will often decide in favor of one piece of land over another, the location of boundaries will often be determined by existing trees and shrubs, the use to which the property is to be put and its whole treatment will also depend very often upon the character of the growth upon it. On a stone surface with sharp ridges and narrow valleys covered with a wild tangle of native plants, it would be as much out of place to attempt to secure broad, smooth stretches of turf and to introduce garden forms and exotic lawn plants, as it would be to interrupt the center of a broad stretch of meadow shaded with fine specimens of native and rare exotic trees with a rough ledge and unkempt tangle of plants.

Having primarily fixed upon the character of the plantation best adapted to the ground in question, the designer will consider disposition and character of the proposed plantations. In his examination of existing plantations he may find that they contain plants that will develop and give the result that he desires, he may find that only a few additional varieties must be added, or it may be that an entirely new plantation must be made. He may find in another place a group of plants that are attractive in themselves but that would interfere so much with the development of a far more important feature that it would become necessary to sweep it away, or it may be as his design develops that he may find this same group so important that he will have to recast his plan on new lines. In one place a tangle of native undergrowth would provide just the conditions that are required to hold a steep bank or make a screen, while in another place a similar undergrowth must be removed and the trees thinned to secure a smooth surface or open up views. After having fixed by a general study upon the relation of the main bodies of planting to

other parts of the plan, and having determined in a general way upon the character of each plantation, the management of the different existing growths, and the details of new plantations will be studied.

You will recognize that a park designer places the greatest importance upon the existing growth upon a piece of land. Almost everyone appreciates fine trees, but too often the importance of an undergrowth of shrubs and herbaceous plants is so little appreciated, that those in charge of the newly acquired park lands will begin at once to "clean it up" by mowing down and grubbing out shrubs and herbs and burning the surface as though the land was to be made a farm. No greater mistake could possibly be made. Every bit of vegetation should be allowed to remain undisturbed until a plan of the grounds is determined upon. Undoubtedly more or less of the existing growth will be removed, but no one can tell in advance where this removal will take place until the study of a plan has been well advanced.

When the natural vegetation is preserved, as it always will be by a good designer wherever practicable, the only work that can be done in it to good advantage by unskilled hands will be the removal from the surface of loose dead wood that will give substantial fuel to a fire. The leaves should not be raked up and burned for they are a protector and fertilizer to the many interesting native flowering plants. Usually it will be desirable or necessary to remove parts of this native growth for the purpose of opening views or encouraging the growth of particularly desirable or interesting native plants both woody and herbaceous by the gradual removal of less desirable kinds. Such work cannot be done by unskilled hands; it should only be entrusted to assistants who know the names and habits of every plant that is growing upon the ground.

Plantations upon the public streets, about recreation grounds, or at points where large crowds will congregate should be made up of plants with uninteresting flowers and a vigorous constitution, tough branches or prickly stems so that they will withstand rough usage and recover quickly from an injury, while those standing close to pleasure walks, terraces, windows, and about buildings where they will be under inspection at all times should be made up of varieties having foliage and flowers that are attractive at all seasons; whereas plants that are to form a part of a landscape to be viewed at a distance should be selected on account of the effect of light and shade that they will produce. Similar considerations will prevail in working out the details of all plantations.

It is generally coming to be realized that native plants, those having a vigorous growth and healthy foliage, should predominate in all permanent out-of-door plantations, and that with these exotics can be used to give variety but in such manner that no serious injury to the appearance of the plantation will

result from diseases to which they are more subject as a class than natives.

Primarily plants are used by a landscape designer as a painter uses his pigments to secure certain landscape effects. He does not select a plant for a position because it is rare but because it gives just the shade of color, texture or outline to complete the ideal picture he has formed in his mind. Some of the secondary motives, such as the provision of screens, the covering of banks, etc., I have already referred to. Another secondary motive that can sometimes be provided so as not to interfere with the landscape effects is the provision of a collection of plants arranged approximately in botanical sequence and grouped together by genera and families and designated by names and numbers in the grounds and on plans, and by corresponding numbers placed on a list. In the bringing together of such a collection however, it is quite essential that it should be restricted within certain clearly defined limits or it will become a menace to the beauty of the park. It may be that it would be a collection of the woody plants of the state similar to the one now established in Cherokee Park here in Louisville, or it may be a collection of woody plants ordinarily found in gardens, as is the case in Shawnee Park. In Iroquois Park, which is already a huge wild garden full of a great variety of trees, shrubs and herbs, it is proposed to add very extensively to the collection of native herbaceous plants so that this part of the flora of the state will be fairly well represented.

One who works out the details of a planting plan must have a thorough knowledge of plants that can be readily secured at a cost that will bring the plantations within the price fixed. Ordinarily plants are purchased by the wholesale in American nurseries at a cost which makes the use of them in very large quantities quite out of the question. If plants are to be used in such large numbers, say by the 100,000 as they ought to be to secure satisfactory results in park plantations, they can be secured to advantage abroad at very low prices, and of such plants some would be large and vigorous enough to be planted at once in their permanent places, while others must stand in nursery room for one or two years. Native plants can often be collected in some places to good advantage. This is however one of the most difficult undertakings to perform successfully that the park planter will have to do with, for it requires a large experience to know just where to secure plants in a satisfactory condition to be transplanted successfully. It is less difficult to transplant native herbaceous plants than it is trees or shrubs. They can be even moved if necessary in mid-summer, provided they are secured with a ball of earth. Very often immediate effects can be secured by trans-planting large shrubs and trees with a heavy ball of earth that could not be secured by other means. The best results are secured however in park planting by establishing a nursery in the very

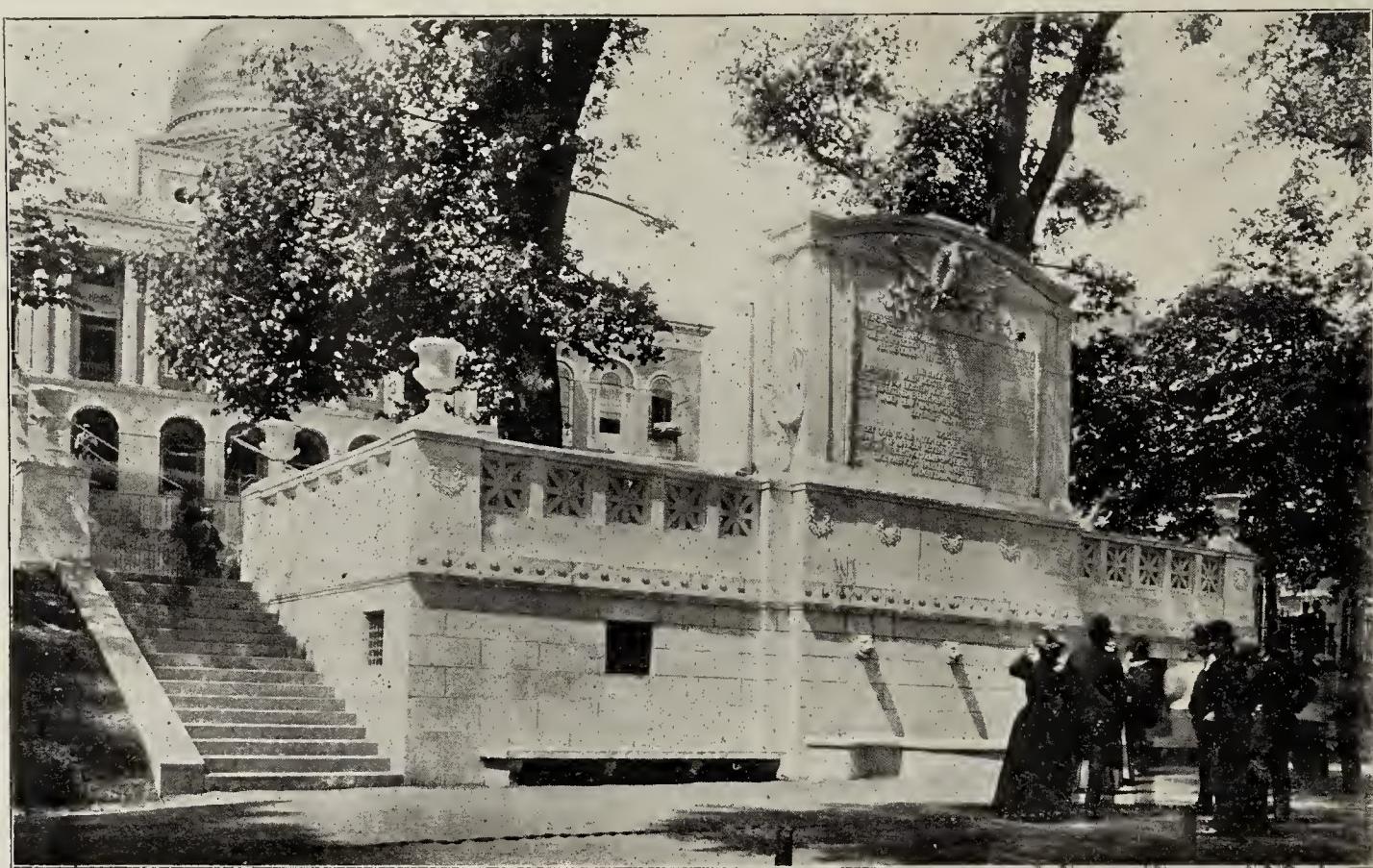
beginning of the work and growing the stock that is required to carry out the plan. If the planting can be anticipated for two or three years, a succession of plants can be grown in this way at a very much less cost and in a much more satisfactory condition than if purchased nursery or collected plants are depended upon. It is most important in park planting to have the soil thoroughly prepared by deep ploughing, sub-soiling, cross-ploughing, harrowing and fertilizing, or in important cases, by trenching. Ordinarily a plow cannot be sunk deeper than six or eight inches, and a sub-soil plow will not go more than eight or ten inches into the ground. It should always be the aim of the park-planters however, to have the ground thoroughly stirred to the depth of a foot or more, and to have the fertilizer turned as deep into the ground as possible. This applies particularly to large areas that can be prepared in this manner. Where individual trees are to be planted, it is hardly possible to give too good preparation. In the Arnold Arboretum the soil was excavated from a hole 20 feet or more in diameter and two to three feet deep, and these holes were filled with good soil before the trees were planted.

In plantations I find that trees are very often planted too deep. Shrubs at about the right depth, herbaceous plants and bulbs too shallow. It is quite important too, to see that the soil is compacted thoroughly about the roots of plants. To accomplish this thoroughly the soil should be trod in place in thin layers, instead of after the hole is completely filled.

Another important point in planting is to see that water does not stand in the hole. If the soil is in such a condition, either the whole field should be drained, or if this is not practicable the holes where the trees are to stand should be drained by having drain tiles run from them to proper outlets.

It is the custom with many planters to trim back shrubs and trees severely at time of planting. Undoubtedly this is sometimes necessary, but in most cases, especially with shrubs, it is quite unnecessary. The theory is that the tops should be reduced to correspond with the reduction made in the roots by digging. The fact is nature provides for this, making a shorter growth and smaller leaves during the first season after transplanting. If it seems necessary to reduce the top, as it sometimes will be, it is much better to thin out whole branches without destroying the natural outline of the tree, rather than to chop off the ends of branches in such a manner as to leave stumps, which not only gives the tree a disfigured look, but later induces decay. The most beautiful trees are those produced by nature without any process of trimming.

After plantations are well established they will require constant attention if the purpose of the designer is to be realized, for no part of his work is so subject to injury, and it is in this work that the most intelligent service and the longest tenure of office is required.



THE SHAW MEMORIAL, BOSTON.—VIEW FROM THE COMMON.

SOME NOTABLE PUBLIC MONUMENTS UNVEILED.

The Shaw Memorial.

Thirty years ago the idea was broached in Boston of the erection of a memorial in stone and bronze to Col. Robert G. Shaw, the hero of Fort Wagner, who was the commander of the first regiment of colored troops sent to the front during the rebellion.

BRONZE TABLET ON BEACON STREET SIDE OF SHAW
MEMORIAL. BY AUGUSTUS ST. GAUDENS.

Copyright by Augustus St. Gaudens.

From *Boston Herald*.

The memorial to his name and deeds, which had its inception in 1866 has at last been erected on Boston Common. More than ten years ago a commission was given to St. Gaudens, the sculptor for a monument to be erected to Col. Shaw and his command. The work has been completed and the granite structure and its bronze reliefs dedicated on Memorial Day, May 30. It is located on Boston Common close to the line of Beacon street. At this point there is a bank, the street being some twelve or fifteen feet higher than the level of the Common. In this bank the structure which is about 70 feet long and 25 feet deep has been erected, the top at a level with the street, and forming a terrace with seats. It rises to a height of four feet above the terrace, in the form of an enclosing railing of Milford, Mass., granite. Midway of the front rises a superstructure, twenty feet wide and about fifteen high, upon which are placed the bronze relief and dedicatory inscriptions.

* * *

The Washington Monument, Philadelphia.

The Washington monument was unveiled by President McKinley at Philadelphia on the fifteenth of May. It was on July 4, 1811, that "the State Society of Cincinnati" met in the State House and resolved to erect a monument to the memory of Washington. Subscriptions amounting to about \$2,000 were then made. By constant effort as well as by the accumulated interest from successful in-



THE WASHINGTON MONUMENT, PHILADELPHIA.

vestments of the fund, it finally reached \$280,000. The cost of the monument has been about \$250,000. In 1876 plans were called for and three years later the design of Professor Rudolph Siemering, of Berlin, accepted. All the figures are of bronze and were cast abroad.

The monument proper stands on a platform of granite, 61 by 74 feet and is six feet and a half in height. It is reached by thirteen steps, symbolical of the thirteen original states. The pedestal is of polished granite, 17 by 30 feet. The equestrian figure of General Washington in colonial uniform stands 20 feet above the pedestal. The total height of the monument is 44 feet; at the four corners are fountains served by allegorical figures of the American Indian. Each of these fountains is guarded by typical American animals. At the front and back of pedestal are allegorical groups, America is seated in the front, holding a cornucopia and a trident, and the rear group represents America rousing her sons to the realization of slavery. The monument stands at the Green street entrance of Fairmount Park.

* * *

The Stephen Girard Statue, Philadelphia.

The monument of Stephen Girard has been dedicated in Philadelphia. It stands on the west side of the City Hall Plaza, facing Market street. The bronze figure of the philanthropist and the decorative panels were modeled by J. Massey Rhind, sculptor. The pedestal is of fine grain New Hampshire granite of a light gray color. The one step course, 11 feet square, rising 6 inches from the ground, forms the bed for the sub-base which is 8 feet square with a rise of $8\frac{1}{2}$ inches, on this is the base 5 feet square, rising $13\frac{1}{2}$ inches, and the die is 5 feet 4 inches high, which makes a total height

of pedestal of 8 feet 10 inches.

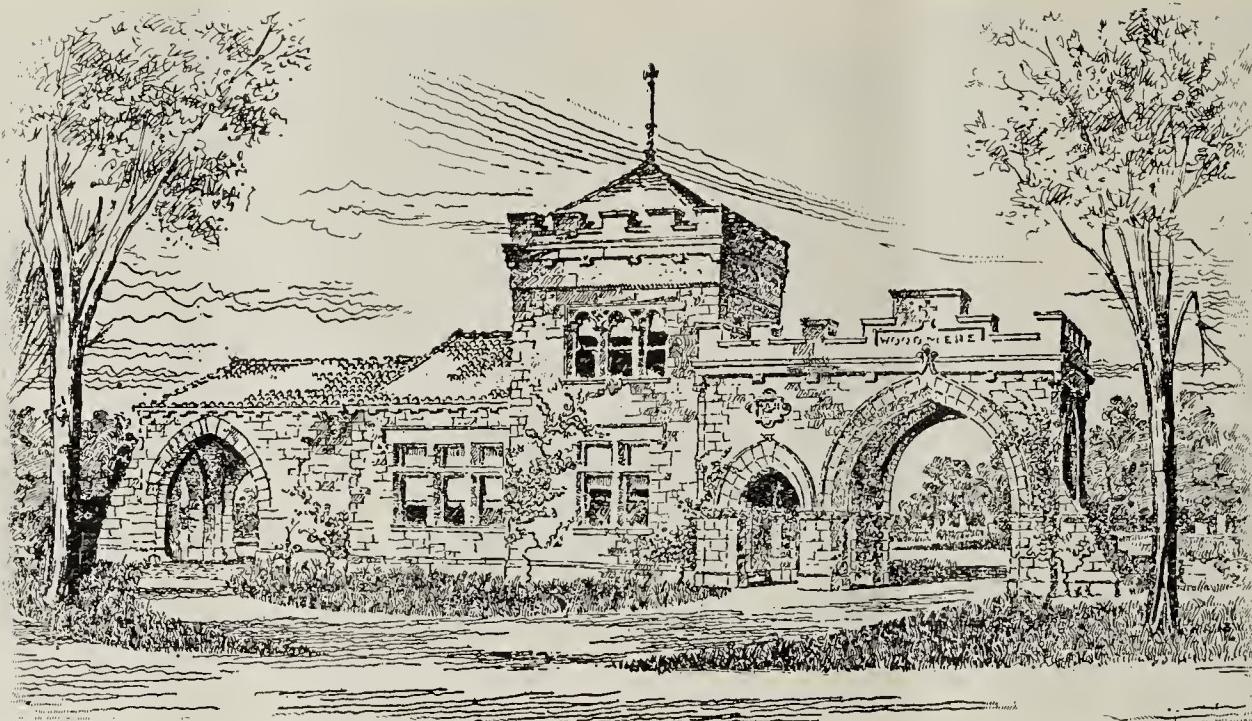
On the front of the die is a graceful wreath, and on either side in sunken figures are the dates 1750-1831. Directly under the wreath is the simple legend in Roman letters the name Stephen Girard.

A bronze panel on the north side of pedestal typifies the grounds of Girard College on "Mothers Day," with the main building of the college in the back ground. On the south side is a panel depicting Girard as mariner and merchant and on the back of the pedestal is the inscription, "Philadelphia's Greatest Philanthropist. Erected by the Alumni College and the People of this City and

Common Wealth, 1897." The upper part of the die is carved in delicate relief and portrays the "Water Witch." The figure of the great philanthropist clad in the ordinary loose fitting garments of the citizens of 1859, stands nine feet high. It is excellent in portraiture and pose.



THE STEPHEN GIRARD MEMORIAL, PHILADELPHIA.



GATEWAY AND OFFICE BUILDING, WOODMERE CEMETERY, WOODMERE, MICH.

GATEWAY AND OFFICES, WOODMERE CEMETERY,
WOODMERE, MICH.

The accompanying illustration gives a perspective view of the new entrance gates and office building in course of construction for Woodmere cemetery, Woodmere, Mich., to take the place of the buildings destroyed by fire in April last which also consumed the superintendents' residence.

The structure will be built of random rock face limestone, with archways, architraves, door and window dressings and cornices of cut sandstone, from designs by Messrs. Donaldson & Meier, architects. The roof will be covered with tile.

The plan provides for an entrance on one side of the offices and exit on the other, which gives a total frontage of 84 feet, of which the building occupies 45 feet, with a depth of 35 feet.

The ground floor will contain a large waiting room, secretary's and superintendent's offices, vault, and eventually toilet accommodations. The second story in the tower will contain the superintendent's drafting and working rooms. The interior finish will be of oak. The gateway at the right will be 14 feet in width, and the exit gate on the left 10 feet. The final cost of the structure will be some \$10,000.

A new home for the superintendent is also to be built just north of the entrance, to be constructed of brick and sandstone trimmings, to cost between \$3,500 and \$4,000. It will be plain but commodious and substantial. The new buildings will be a great improvement on those formerly occupying the site and will meet the requirements of modern ideas in this direction.

SOME EARLY HISTORY OF THE PARKS OF NEW YORK CITY.

The first park created in New York dates back considerably over a hundred years.

On the 15th of August, 1785, a letter was published in the *New York Packet*, addressed to the mayor and aldermen of New York, in which the writer said:

"The size and consequence that this town must one day arrive at ought strongly to impress the necessity of attending to this object, as well as to contribute to the comfort and health of the inhabitants, as from the propriety of adding to the public ornaments of the city. In this view the Battery naturally presents itself as a subject capable of vast improvement, were the margin of this ground laid out with judgment, planted with a row of trees and furnished with seats, from whence, after being jaded with the heats of August, we could enjoy the cool breezes of the evening and admire the beauties of one of the finest harbors in the world—what an ornament would this city derive from it."

How correct this writer's judgment was, all who have ever seen the Battery well know. The Battery, however, was not the first open space in the city, which is now a park or square. It is the Bowling Green which has this distinction. The name Bowling Green reminds us that in 1732 certain burghers, who then lived in lower Broadway, leased this plot of ground from the city in order to play the now wellnigh forgotten game of bowls upon the grass plot there. As is well known the block bounded by Bowling Green, State street and Whitehall street was covered as far back as 1645 by a fort, erected by the Dutch, and which remained there until the end of the last century. On the site of this fort was erected in 1790 what was known as the governor's house, originally designed as a residence for the president, and subsequently occupied by Governors Clinton and Jay. It was afterward used as a customhouse, and was torn down in 1815.

The open space in front of this fort was once called the parade, but it was used at various times for different purposes. At one time it was a cattle market. At another time a fair was held there. Later, as has already been stated, it was used as a bowling green. In 1770 the famous statue of George III. was erected there, and in 1771 an iron fence was put about the square, which was then four-sided, and not oval, as at present. The statue itself was destroyed by the Americans in 1776, but its base remained in the square until 1818, when it was finally removed. The slab at the top of the pedestal is now in the possession of the New York Historical Society, and is one of its many curiosities.

Where Battery Park now is there was years ago water. A ledge of rocks ran along the lower edge of the island, and on the shore facing these rocks there was erected in the early days a line of works called the Battery, which extended from Whitehall street in the direction of Rector street. The land was not filled in for many years beyond this line of works, which existed for a long time, and it was not until long after the beginning of this century that what is now Battery Park was extended out into the bay to the present bulkhead line.

The so-called Battery was not put to any practical use during the revolution for the simple reason that the Americans had no means of attacking New York from the water side.

What is now Castle Garden was built in 1806 by the government, and called Fort Clinton. In 1823 it was turned over to the city of New York, and was used after that as a place of amusement until it became a station for the landing of emigrants. It has recently been turned into an aquarium.

As the land was extended beyond the old water line, and after the laying out of State street, in the last century, this part of New York became a favorite resort for the people by reason of its proximity to the water and the fine views to be obtained looking down the bay and up the East and North rivers. In 1794 a man by the name of Corre was licensed to sell small drinks in Battery Park, something which has been considered of sufficient importance to be referred to in almost every book in which the Battery is described. Near to his stand there was a tower surmounted by a flagstaff, long called the churn by reason of its fancied resemblance to a churn.

City Hall Park is a part of the old city commons, which stretched from where the postoffice now is to the present site of the Tombs, and from Broadway to the Boston post road, now Park row. These lands were ceded to the city of New York by the Dongan charter, in 1686, and the grant was confirmed by the Montgomery charter, in 1730. Gradually what is now the City Hall Park was carved out of the lands by the laying out of Broadway along its westerly side, the cutting through of Chambers street and the building up of the houses north of Chambers street. Somewhere north of Chambers street a line of palisades was run across the island in 1747. In 1757 what was then called the new jail was built. It is now occupied by the register's office. The building has been much changed, but outwardly still resembles the old structure sufficiently for it

to be identified when compared with old pictures.

On the site of the present city hall there was erected in the last century an almshouse. The present city hall was built in the early part of this century, and the corporation of the city met there for the first time on July 4, 1811. On November 1, 1765, after the arrival of the famous stamps from England, there was great excitement in New York city.

In 1766 the stamp act was repealed, and the people of New York took part—for the last time—in a great celebration in honor of the king's birthday. Among other things a liberty pole was erected, the destruction of which, in 1767, by the English soldiers brought about a series of tumultuous scenes, which lasted until the revolution. The pole was cut down four times between 1767 and 1770, and that which was erected in 1770 stood until 1776. The last pole was erected upon land not far from Warren street, which had been purchased by the Sons of Liberty, and on this pole was a vane with the word "Liberty." A flag with the inscription "Liberty and Prosperity" was flown from the pole by the Sons of Liberty.

The Declaration of Independence was read on the commons in July, 1776, but this was one of the last acts done by the Americans on the commons until the surrender of New York at the close of the war. A great many American prisoners were confined in the new jail, with much suffering and no little unnecessary cruelty. In 1821 an iron railing was put up about the park. At the southern end there was a gate with posts on the top, which were some old Turkish cannon balls said to have been brought from the east by a Grecian pilot. The lower triangle of the park was used during the rebellion for sheds where the soldiers were supplied with food. After the war it was ceded to the United States government, and the ugly postoffice was there erected.

Central Park was laid out pursuant to an act of the legislature, passed in July, 1853. Prior to the passage of this act an effort had been made to establish a park in what was known as St. John's wood, a thickly wooded piece of land lying between Sixty-fifth and Seventy-fifth streets and Third avenue and the East river. An act had been passed in 1851 authorizing the laying of a park here, but hardly had the act been passed when violent opposition was raised to the plan and a statute, which has been referred to, was enacted, creating the Central Park commission, consisting of eleven men, the names of many of whom were well known in New York city. Charles H. Russell, John F. Butterworth, Waldo Hutchins, Andrew H. Green, Wm. K. Strong and Robert J. Dillon were included in the commission. The commissioners immediately entered upon their duties and called for plans for the laying out of the new park. Thirty-three plans were submitted, of which that drawn by Olmsted and Vaux were so far superior to the others that it was immediately selected and work on the park was commenced.

The above facts are taken from an article in the Brooklyn *Daily Eagle*, compiled from addresses on the City's Parks by Gherardi Davis, delivered before the New York Historical Society.

CYPRESS LAWN CEMETERY, SAN MATEO CO., CALIF.

The cemetery question in San Francisco, has been a much discussed subject for some years past, and the conditions long ago suggested that sooner or later cemeteries must be established outside the city limits. In view of this and the facts that a new era of cemetery design and management had come to pass, coupled with the unexceptionable advantages that the beautiful climate of California afforded, it was reasonable to expect that any new cemeteries to be planned would incorporate the best practice and most modern ideas in their creation.

The following, accompanied by the illustrations given, will show how Cypress Lawn Cemetery, designed as a burial place for such a city as San Francisco, has met the requirements.

Cypress Lawn Cemetery which was organized in 1892, is situated in San Mateo Co., ten miles south of San Francisco and comprises some 73 acres of land. It lies on the county road between the Jewish and Catholic cemeteries, with which it forms a line of cemetery frontage of a mile and a quarter. The San Bruno mountains rise immediately at the rear, forming a picturesque background and giving an elevation from front to rear, over its gently roll-

ing area, of one hundred and twenty feet. This affords excellent opportunities for effective landscape work, facilities for a good drainage scheme and besides, offers fine views of the cemetery from every section. With the wealth of material at command, the comparatively even seasons, and the semi-tropical climate, there should be no question as to the ultimate development of this cemetery on the highest plane of refined practice.

The soil is a sandy loam, about 18 inches deep, overlying a bed of hardpan. This assures dryness and immunity from caving.

The sections are laid out as they may be required, and up to date, sections, alphabetically denominated, from A to G are in use; the largest lots have an area of 4,000 feet.

A section on the south adjoining the Catholic cemetery is allotted to single graves, arranged in three tiers and here headstones only are permitted, limited to 18 inches high. This section is not included under the Perpetual Care clause, which operates throughout the cemetery with this exception.

The lawn plan is strictly enforced and some four acres in the front of the property is reserved for ornamental planting. The mounding of graves is restricted to a height of four inches, and only one monument is permitted to a lot, and this subject to approval, the design for which must be submitted.



MORTUARY CHAPEL—VIEW OF APPROACH FROM SOUTHERN BOUNDARY.



VIEW SHOWING NEW CREMATORIUM.



THE PALM
HOUSE.

Many costly mausoleums and monuments have been erected—the Celtic cross to the memory of Bishop Kip being among the number.

The San Francisco Cremation Co., operate a crematory in Cypress Lawn, and the Columbarium illustrated herewith secures a permanent resting place for the ashes of the departed. Perpetual Care is also applied to this structure and its contents.

The cemetery is provided with a greenhouse, 150 feet long, and a Palm house. A nursery is also maintained for cemetery purposes. The first interment was made June 4, 1892; to January 1, 1893, 48 bodies had been buried, since which time there have been 920 burials. Perpetual care is provided for by a compulsory addition of $3\frac{1}{3}$ per cent. on



COLUMBARIUM.

Two artificial lakes add to variety of landscape. The water supply for the grounds is drawn from artesian wells, the pumping capacity of the water works equalling 250,000 gallons per day.

The Receiving Vault, in rear of the Mortuary Chapel, is at present provided with only 24 niches, but it is intended to increase its capacity to 150 niches in the near future. This vault is in electric communication by a secret wire with the office, and any tampering with the doors of the niches immediately calls the attention of the office, in which is a watchman night and day. This connection may be easily adapted to prevent ante-mortem burial.

The entrance to the cemetery is through a massive granite gateway of handsome design, which is ultimately to be surmounted by a marble figure of "Father Time." The chapel, seen in the illustration, is built of brick and stone, with conservatories on either side, and is intended for the free use of patrons. The cemetery is conducted on non-sectarian lines.

Access from the city is secured by the Southern Pacific R. R., which runs three funeral trains every day; by electric road which maintains a 15 minute service; or by a drive over a beautiful roadway of an hour and a half. Funeral cars of special and appropriate design and arrangement are operated on both the railroad and electric road.

the price of all lots, this amount being accumulated as a general fund, the interest of which is applied to the care of the lots. In the conduct of the several duties devolving upon a cemetery, the management aims to keep abreast of the times, and the methods and suggestions of the best practice is in vogue. Neat uniforms distinguish the attendants, tents are provided in stormy weather, while the rules and regulations are framed to secure both the welfare of the cemetery and the comfort of the lot owners in its many senses. The grounds were laid out under the supervision of Mr. W. J. Blain, the present superintendent, and the corps of help under his jurisdiction varies from 20 to 25 men.

HERBACEOUS PÆONIES.

The magnificent showing made in the vicinity of St. Louis this spring by herbaceous Pæonies emphasizes their value and that of herbaceous material in general. Pæonies alone, when grown in numbers and variety, give more than a month of bloom, and nothing excels them in effectiveness when well chosen varieties are properly massed. They furnish variety in form, color and foliage, there being single, semi-double and very double flowers, in rich crimson, rose, deep pink, faint blush pink, salmon tints, mauve, and pure white besides the less desirable purple tones which, however, do not approach the faded magenta purples seen in some flowers. And some of the blossoms equal in fragrance the sweetest roses—one bloom filling a house with perfume.

The foliage of some, especially of the early varieties among both the single and double sorts, is of fine quality, and resembles both in form and coloring that of *Dielytra spectabilis*, known in old-fashioned gardens as Bleeding Heart, and is as unlike the more commonly seen type of *Pæonia* foliage as are the fern-like leaves of *P. tenuifolia*.

The colors, as far as I know them, are harmonious and suitable for use in mixed plantings, but the best effect is undoubtedly secured by either massing



DOUBLE WHITE PÆONIES.

the colors separately, or by so blending the light and dark colors by means of the many intermediate shades as to melt the deep tones gradually into the lightest.

The different varieties of foliage, too, are excellent in combination, and make a good appear-

ance after the flowering season is over, much better in mixed plantings than when the heavier and coarser leaved kinds are grown alone.

I this spring visited an old-time garden in which clumps of hardy flowering herbaceous peren-



“AN OLD-TIME GARDEN.”

nials, flowering shrubs, and trees, crowded each other for room, and vines ran in and out weaving unexpected arbors and depending in graceful drapery. Along the grass grown, dandelion studded, brick walks, lovely anemone-flowered Pæonies were in full bloom, tight crimson balls glowed among the finely cut foliage of *P. tenuifolia*, delicate mauve semi-double flowers rose from pale, glaucous leaves, and deeper colored ones bent under their own weight of crowded petals, while many others gave promise of a later harvest. Although other flowers were there the place seemed abloom with the Pæonies that stood like great bouquets on every hand. A satisfying garden and one that would have left the impression of an overflowing abundance of bloom had there been nothing but the Pæonies in it.

Fanny Copley Seavey.

AN IDEAL SPOT.

In our village cemetery every lot is planted or neglected according to the taste and means of the owners. Thus one sees many graves that are uncared for except for occasional cutting and trimming of the grass. These tell a sad story of cold affections, or of absence and forgetfulness. Often, however, in this old graveyard, such neglect means that the hand of death has spared none to perform the office of caretaker of the graves of a family. Generation after generation lie here side by side.

Sometimes, in tangled luxuriance, one sees here old roses that are no longer offered by any

dealer, and indeed an ancient graveyard is a good place to explore in the search for obsolete flowers and plants whose fashion has long since passed away.

In this quiet place there is one spot of ground which shows refined taste and tendrest love and care. This is a lot in which there are only two graves, the oldest that of a vigorous man cut down in his prime, and the other that of his grandson, a lovely boy of seventeen. These graves are tended by the daughter and mother of the dead.

Here grow the loveliest and most fragrant flowers. She brings only her best and most beautiful offerings to this sacred place, where are laid her best beloved.

Here, no matter what the season, all is harmonious, beautiful and restful. Early in March the crocuses, yellow, white, and purple, bloom in the greening grass. They are planted over the graves and everywhere except in the flower border, which is reserved for less sturdy plants.

With the exception of Crocuses and Snowdrops, which are planted for their very early bloom, nothing is given here a place which is not fragrant. A large clump of single white English violets blooms upon each grave, embedded in the grass. It is the object of the owner of this lot to plant here nothing but hardy flowers that take care of themselves and do not need constant renewal so that, when she too is called away, they will still bear witness to her love and go on blooming every year to keep her memory green.

White hyacinths make the air fragrant in April, and then come Poet's Narcissus and Wall flowers, with their memories of home. For vines she has trained over the foot-stone of one of the graves a white Jessamine which blooms in July, and an Akebia quinata clothes the stem of a pink-flowering Locust which marks one corner of the lot. A Sweet-briar rose sheds fragrance in the air throughout the summer, and a white Madame Plantier rose is beautiful in June.

A fragrant Honeysuckle sprawls over a tall white Lilac bush, and these are all the large plants that the space permits, except one Japanese Euonymus which is evergreen and covered in winter with bright berries, and a beautiful specimen of Thunberg's Barberry on which the scarlet berries glow until replaced by yellow blossoms in the spring.

In May the fragrant yellow lilies, *Hemerocallis*



VIEW IN CYPRESS LAWN CEMETERY, SAN MATEO, CO., CALIF.

flava, open here in company with Mountain Heliotrope, *Valeriana officinalis*, two plants beloved for early association in the garden at home, and Lilies of the Valley have found a bed in the rich soil. Late in June the tall white Madonna Lilies perfume the air, and after they have faded the Day Lilies or Funkias carry on the succession of fragrant flowers. In the fall the little place is lively with white chrysanthemums, and even in the winter it is cheered by the foliage of the evergreen Honeysuckle and Akebia and the bright berries of the Euonymus and the Barberry. The grass often remains fresh throughout the year, and wreaths of evergreen mingled with Holly berries and sprays of the Bitter Sweet are often laid on the graves in the dreary season of winter.

Here there is no ostentation, no display, but quiet taste and loving care have made the spot beautiful. I have described it because it is so easy to tend and watch over such a little garden in the graveyard, and because many want to know what to plant in the sacred soil where their dearest are laid to rest.

Other beautiful and fragrant flowers can be used and some of them I may describe another time.

Danske Dandridge.

Shepherdstown, Jefferson Co., W. Va.

The geysers of the Yellowstone National Park are failing. Their force has fallen off 50 per cent in sixteen years.

Nearly seventy round towers, from 30 to 135 feet high, are found in various parts of Ireland. They are believed to have been used in the ceremonies of fire worship.

GARDEN PLANTS—THEIR GEOGRAPHY., XIX.

ROSALIS, (C.)

THE GENISTA, ROSA AND DROSERA ALLIANCE.

The group of plants which follow would, I think be better distinguished in gardens by the term saxifragales. For the most part they are sufficiently distinct from roses, often humble, and widely diffused over the world. While there is a good selection of hardy deciduous shrubs for northern gardens, large numbers of handsome shrubs and even trees of an evergreen habit are adapted to the warmer regions. *Hydrangeæ*, *Escalloniæ*, and *Cumoniæ*, each embrace genera of considerable beauty. *Callicoma*, some *Geissois*, *Ceratopetalum* *Caldcluvia*, *Davidsonia*, and various *Canoniae* may be mentioned as examples. The tribes *Saxifrageæ*, *Crassuleæ*, and *Drossereæ*, often present extremely humble species, now and then varied by bushy plants such as *Drosophyllum Lusitanicum*, and the South African *Roridula*. Very many are Alpines only adapted to the higher mountains, and cultivation, perhaps in sphagnum.

Astilbe has 6 species from the Himalayas, Japan, Java and North Eastern America. They sometimes caricature species of the *Aruncus* section of spirea strongly, but botanists say they are distinct, and there doesn't appear to be anything in the way of a bridge in this case. *A. Chinensis* (known as *Japonica*) has a variegated, and also an autumn flowering form. European hybridists are at work on them too, and if they should produce a lot of varieties bridging the gap between *Astilbe*, and *Spirea*, what then? Probably many of our scientists would rather seek the missing-link in the coal measures.

Saxifraga has 180 species, natives of the temperate and Arctic regions of the northern Hemisphere, and of the Andes. They are loaded with generic and specific synonymy, but as they are not very much used in gardens perhaps it doesn't matter! Several are showy, both in flower and foliage.

Tiarella has 5 species 3 of which are North



TIARELLA CORDIFOLIA.



DIONÆA MUSCIPULA.

American and the others Himalayan. The Eastern species which we figure is widely diffused through the southern mountains to New England and west-



HYDRANGEA QUERCIFOLIA.

HYDRANGEA HORTENSIA, VAR.

HYDRANGEA PUBESCENS.

wards to Indiana. It is a woodland plant with white flowers, and is inserted chiefly to compare it with the remarkable plant *Gunnera Chilensis*, mentioned further on.

Heuchera has 15 or 20 mostly white flowered species, all North American, and called "Alum root." *H. sanguinea* from the southwest has proved itself a pretty garden plant. It is found at elevations of about 5000 feet growing on limestone ledges.

Parnassia, grass of "Parnassus" is a somewhat singular genus of 14 species all natives of the northern hemisphere and ascending the mountains of India to great altitudes. Some grow in dry places and some grow in wet. Some are very small, some much larger, with flower scapes a foot or more high. They are worth naturalizing in a garden near to *Deutzias* and "mock oranges" just for comparison. There are three or four native species.

Hydrangea has 33 species of shrubs and climbers from the Malayan Archipelago, the Himalayas, Eastern Asia and North America. They are often very handsome garden shrubs, quite mutable in color from pink to blue, and sometimes attaining to great popularity as forced florists flowers. From central New Jersey southwards the Japanese varieties of *H. Hortensia* are fairly hardy garden shrubs, and when given good moist soil under a shady north wall are often magnificent, loosing their flower buds only in seasons of protracted severity. Strowing them up will sometimes prevent this in the open

border but not always. Of other Japanese kinds *H. Thunbergi* seems quite hardy, and may be trusted further north. *H. involucrata*, *H. petiolaris*, (often confounded with *Schizophragma*), and *H. pubescens* are other species from Japan, not forgetting the varieties of *H. paniculata*, which, if the early flowers be cut as soon as mature, will sometimes flower a second time and continue until frost. *H. altissima* and *H. vestita* are Himalayan. *H. arborescens*, *H. radiata* and its varieties and *H. quercifolia* are southern United States species, hardy well northwards.

Kirengeshoma palmata is said to be a yellow flowered plant in close affinity with hydrangea. It has a very Japanese name, but beyond that I know nothing about it.

Schizophragma is a monotypic climber from Japan, often confounded with the somewhat similar native *Decumaria*. Both climb by rootlets in the way of ivy.

Deutzia is a well-known popular genus of shrubs in seven or eight species from the Himalayas, China, and Japan. *D. crenata* has produced double varieties.

Deeumara barbara is the "climbing native hydrangea" found growing on trees and other such supports from southern Virginia to the Gulf States.

Philadelphus, "mock orange," has 12 species from Europe, North America, Japan and the Himalayas. The European and some other species are fragrant, the native species though quite handsome are scentless, the racemes of some closely resemble orange flowers in color, size and shape, but not at all in fragrance. The leaves of the European kind are sometimes used by French cooks in salads as a substitute for cucumber, which they resemble in flavor.

Platyerater arguta is a monotypic shrub from China and Japan.

Jamesia Americana is also a monotypic plant, a native of the southern United States.

Fendlera from Texas, and *Carpenteria* from California are also single species, of which these tribes are rather full.

*Eseallonia*s are a genus of handsome evergreens in 45 species, all from South America, often ascending from 6,000 to 14,000 feet on the Andes. About a dozen are hardy in the south of England, and one or two are kept in southern nurseries from Georgia to the Gulf. They are excellently adapted to climates similar to that of Central California.

Valdivea Gayana is a Chilian monotypic evergreen herb, pink flowered and hardy in southern Europe.

Itea Virginica is the only plant of this tribe (*Escalloniæ*) hardy at the north, and known in gardens, but there are three or four other species in herbaria from the Himalayas, China, Java and Japan.

The tribe *Cunoniæ* contains a number of handsome evergreen genera, all from sub-tropical and tropical climates.

Ribes is the gooseberry and currant tribe. There are some 75 species and a great many varieties both natural and of the garden. A few are quite handsome such as *R. sanguineum* for instance. It is a little remarkable that varieties of this species fruit freely and well on Scotch walls, and but rarely on English ones. *R. sanguineum* extends eastwards from California to the Rocky mountains I believe, and it should be had from the latter stations for Eastern cultivation. The variety *Nevadense* is a dwarf 2 to 4 feet high, found at elevations of 10,000 and 11,000 feet in Nevada, Colorado and adjacent regions.

Crassula has 130 species from South Africa and Abyssinia, with a solitary species from the East Indian mountains. There are a number of handsome plants among them, among the rest a plant often seen in green houses under the name of rochea? *C. falcata*. It and several others of the genus are seldom seen in flower, but are well worth attention to their needs, which is commonly an intense dry rest close under a south wall away from the possibility of rain. This treatment following a good growing season in winter and early spring will often cause the above species and *C. coccinea* etc., to flower beautifully in greenhouses, but the climates of some parts of California ought to develop them admirably.

Sedum is a genus of 150 species, all natives of the Northern Hemisphere. They are called "stone-crops" quite appropriately. I have seen bare shelving rocks on the north shore of the St. Lawrence golden with the little *S. acre* and many others grow naturally in similar positions. Not only are the flowers of many kinds showy, but the mossy evergreen foliage in many shades of bronze, grey and green renders them well adapted for covering mounds, rock work, and barren places generally. *S. cœreleum*, *S. lydium*, *S. acre aureum*, and several others are thus used as carpeting plants, and may be sheared if the flowers are not valued. Among taller growers *S. spectabile* and *S. Maximowicksii* are handsome border plants, and will endure the driest summers. One or two leading nurseries kept fine collections some years ago, and it is best to select them from such places, for the names are often much confused.

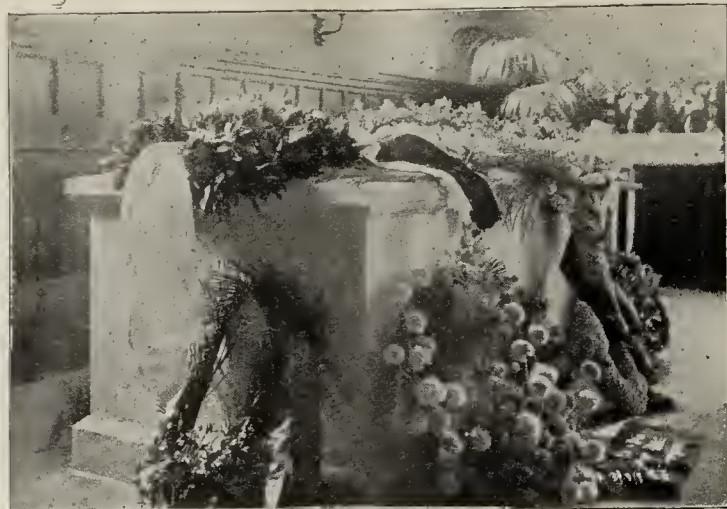
Trenton, N. J.

James MaePherson.

PRINCE HENRY OF BATTENBERG'S TOMB.

I have thought it would be of interest to your many readers were I to present to them the accom-
ing view of the interior of the Whippingham Church, one showing the tomb of Prince Henry of Battenberg with its decorations, the other, the church itself during the occasion of the burial of the illustrious Prince. Such views as these are always of interest to everyone, besides being instructive to many, as showing what ideas prevail in other lands concerning the use of flowers to be placed above the remains of the dead.

The church of Whippingham is popularly known as the Queen's Church, having been built in 1861, after designs by the late Prince Albert, husband of Queen Victoria. It is about 2 miles from East Cowes, which itself is quite near to the Queen's residence, Osborne, and occupies the side of a hill which slopes to the river Medina. The Queen worshipped there formerly much more than she does now. Her pew, which is approached by a private door, is in the chancel, and over it is a handsome white marble monument to the memory of the late Prince Consort. This monument, an inscription tells us, was "placed in the church under his direction by his broken hearted and devoted widow Queen Victoria." Prince Henry of Battenberg, as you readers know, was a son-in-law of Queen Victoria. This in itself was sufficient to endear him to the English people, but in addition to this he lost his life by fever contracted while sustaining the arms of England in a foreign land. To those not of English birth or who have not spent some time in England, it is impossible to convey an idea of the enthusiasm anything relating to royalty inspires. It speaks volumes for the loyalty of the



THE TOMB OF PRINCE HENRY OF BATTENBERG.

come the husband of the Princess Beatrice. Yet solely on this account, as a part of their beloved Queen's household, all England was grief stricken at his death, and at his funeral the pageant was a most imposing one. The photographs show how beautifully his tomb, as well as the church itself was decorated, the church artistically so, I think.

To me, flowers seem most appropriately used to place above the remains of those we have loved. We erect monuments, sometimes of marble and sometimes of flowers, over our fallen heroes, both to honor the dead and to inspire the living. The marble inscription tells of the heroic deeds performed, the flowers, that our love is still there, and that fame is undying. But recently a most useful citizen of Worcester, Mass., died, and his will contained the request that no flowers should be placed over his remains. He loved them too well to see them thus desecrated, he said. But there is something the most of us love more than flowers, and when the dear ones are gone from us, we want to give that which we think best represents our thoughts, and that is flowers. It is, indeed, a touching sight on Decoration day and on other occasions, to see the number of persons wending their way to the cemeteries, each one with some floral tribute to lay on the grave of some loved one who has gone from them. And who can express the satisfaction it is to many of them to feel that there is yet this one little gift they can make to their dead? I have seen in certain cemeteries the same graves decorated with fresh flowers with unending devotion for years and years. In one of our Philadelphia cemeteries, Mount Moriah, which I often visited some years ago, was a lot in which were the graves of some children. Every Sunday there came to the spot the father and mother, who strewed the little graves with flowers, and then took seats under the shade of a leafy arbor where they sat seemingly



INTERIOR OF WHIPPINGHAM CHURCH, ISLE OF WIGHT.

people, when sentiment takes such strong hold of them. This Prince was a foreigner, and had no claim on the English people save that he had be-

lost in contemplation. I have no doubt the following lines, the authorship of which I have forgotten, well expressed their feelings, as it has done that of thousands of others.

If I had known thou couldst have died,
I might not weep for thee;
But I forgot when by thy side
That thou couldst mortal be.
It never through my mind had passed
That the time would e'er be o'er,
When I on you should look my last
And thou should'st smile no more.

Joseph Mechan.

MICHIGAN'S EARLY WILD FLOWERS.

It is a curious fact that while very many American flowers are equal or superior to foreign species for many departments of ornamental gardening, particularly for planting in parks, much less is known about them and their habits than is known concerning foreign species. This is particularly true regarding the class of native ornamentals of which I now write. Each florist well knows that the Hyacinth, Tulip, Crocus, Narcissus, Fritillaria, etc., are of similar habit with regard to season of growth and flowering, being in this respect very unlike most plants. Most herbaceous perennials of the temperate zones start into growth in the spring, flower and perfect seed later, die down in autumn and rest during the winter, often until late spring. Not so with this class of plants. They are dormant during summer, start into growth below surface of ground late in autumn, in some cases growing all winter, and as soon as winter's frosts and snows go, shoot up, and flower very early, many of them being the earliest spring flowers. Experience teaches that as a rule, plants are most safely handled when dormant, therefore it is evident that the only proper time for handling these plants is in summer, after the ripening of the foliage and fruit and maturing of the bulbs or tubers, and before growth starts again in autumn. No grower of spring flowering bulbous or tuberous plants thinks of taking them up in the spring when in full foliage, but he waits until the flowering season is over and the bulbs or tubers have become fully matured, digs them when the leaves begin to turn yellow and decay, and issues a catalogue of Bulbs and Tuberous plants for fall planting. This is the universal custom with regard to foreign early flowering bulbous and tuberous plants, and yet very few recognize the fact that our American early flowering bulbous and tuberous flowers require exactly the same treatment, but constantly undertake to procure and plant them out of season, and then wonder why their attempt to grow them fails.

Now many of our American ornamentals are just as worthy of attention as are foreign ones, and some fill a place in ornamental gardening that foreign species cannot fill. Many are very useful for the flower garden, park, cut flowers or forcing. Among these our early blooming bulbs and tubers are very valuable. These plants with other low-growing early blooming perennials clothe our Michigan forests with

rare beauty. This spring they have been particularly beautiful. The writer is located at Rochester, Michigan, upon the eastern slope of a range of hills which extends from Northern Indiana to near the 'Tip of the Thumb'—point of Huron Peninsula, Lower Michigan, being shaped like a left-hand mitten—some 12 miles from the summit of the ridge, and 3 miles from the plains at its base; a region remarkable for its flora, three distinct botanical regions being within 30 miles, as well as the characteristic flora of the highlands and plains, forest and swamp, river and lake, for the surface is exceedingly varied, often presenting landscapes surpassing any park. In this region we find large forests with the ground in early spring literally covered with early flowers, bulbous and tuberous, as well as vast numbers of other low perennials such as the Tiarella cordifolia, Hepatica trilobata, H. acuteloba, 10 beautiful species of Violets, Ranunculus fascicularis, R. septentrionalis and its large trailing form, Phlox subulata, P. nivalis, P. horlosa, L. Sithospermum canescens, G. hystrix, etc. Large forests are great flower and fern gardens beautiful beyond description. We notice that the flowers we have mentioned except perhaps Trilliums and a few others, usually grow in large masses or natural flower beds of irregular outline, densely covering the ground where they grow. This is a good hint for the landscape gardener, for certainly these masses of a certain kind, distinct by itself, yet in contact with masses of other species, greatly increases the ornamental effect of each species, for single plants of these small ornamentals, handsome as they are, would produce but little ornamental effect. Again we see their usefulness for planting about clumps of shrubbery or taller plants, particularly of those that flower later. If such planting was practiced in many of our city parks,—I notice this lack particularly in Belle Isle park, Detroit, Mich.—the beauty of these parks would be greatly increased, and it would also serve to preserve the health of the shrubbery by covering the bare ground at its roots, thus retarding evaporation. Belle Isle Park is a very beautiful park indeed, yet many forests in the hills 20 to 40 miles northeast show far greater beauty in early spring, although many wild flowers grow naturally at the upper end of this Island park. If quantities of low native perennials, especially those with enduring foliage and particularly early bulbous and tuberous plants like Dicentras, Cardamine purpurea, Dentarias, Trilliums, Isopyrum biternatum, Claytonia, Virginica, etc., the beauty of the park would be vastly increased. But I suppose the park commissioners have never visited any of our upland forests, nor discovered the value of low plants as the conservers of moisture for shrubbery and trees.

Green grass is pretty, but too much of it, and nothing else about the roots of trees and shrubbery, becomes very monotonous and uninteresting, besides low shrubs and herbaceous plants in a forest are very essential for the preservation of the health of forest trees, particularly in the time of severe drouth. No forest ever recovers from the injury sustained by its being turned into a sheep pasture.

The ground is usually moist in the spring when these early bulbs and tubers flower, but as summer advances it becomes very dry and hard, which does not affect these plants, they then being dormant, not a trace of them on the surface of the ground, but they resume growth with the coming of the autumn rains. They must be dug as soon as the plants above ground show signs of decaying, but may be kept until time for fall growth to begin, buried in not too dry soil, in a rather shaded place. Trilliums may, however, be kept as easily as canna tubers. With proper care in packing they may be shipped long distances though the weather be hot. Remember the season when they are dormant is the only proper time to handle them. A few may be handled in the spring, even when in flower, but at best in small quantities, and not with much satisfaction, particularly if gotten from any considerable distance.

We will now describe those found in South Eastern Michigan.

ALLIUM CANADENSE, *Canada Onion*. This plant is very conspicuous in Michigan forests in early spring, densely covering the ground, the long narrow leaves rising straight about two-thirds of their length, then gracefully recurving, indeed very pretty and conspicuous. Flowers white, not pretty. Bulbs and young plants edible. Two varieties: 1—Leaves very long and very narrow, deep rich green. 2—Leaves broader, glaucous.

ALLIUM TRICOCCEUM. Leaves lanceolate, glaucous, pretty in early spring. Flowers white in June, not very pretty.

ANEMONE NEMOROSA. *Wood Anemone*. This is decidedly a very pretty plant when growing in dense masses as it does in its native wilds, but a single plant would not make much of a display. Grows three to six inches high, with a whorl of three trifoliate leaves and a solitary white flower of about three-fourths of an inch wide, purple outside. Sandy shades. Very hard to collect before maturity of fruit, as the long, thickish rhizome is then very brittle.

ARALIA TRIFOLIA, *Ground Nut Ginseng*. Grows 3 to 6 inches high with a whorl of three, three to five, parted leaves and a cluster of white flowers early in May. The round tuber very deep in the ground, yellow, edible. Has both pistillate and staminate plants. Not showy enough for extensive planting, though pretty.

ARISAEMA DRACONTIUM, *Green Dragon*. Conspicuous, very odd and quite pretty, foot or more high, with large leaf, divided into seven to eleven long, narrow leaflets. Spadix five to seven inches long, white, extending beyond the green spathe. Root a large corm, exceedingly acrid. Not recommended for extensive planting, yet decidedly attractive and interesting from its oddity. Looks best scattered about among lower growing plants. Berries red.

ARISAEMA TRIPHYLLUM, *Indian Turnip. Jack in the Pulpit.* An odd, handsome, interesting, easily grown aroid, one to three feet high, with two large three-parted leaves, and at the summit a large, rich deep brown purple or green recurved spathe, enclosing a thick club shaped spadix, bearing a cluster of either pistillate or staminate flowers at its base, the former followed by a large cluster of bright, scarlet berries. Flowers in

May. Root a large corm, very acrid; medicinal. An interesting and attractive plant, worthy of being planted quite extensively in parks, etc., rich, moist woods. Shows better mixed with low plants. Scattered about in large masses might be monotonous in this case.

BICUCULLA CANADENSIS. *Dicentra Canadensis. "Squirrel Corn."* This beautiful little plant is one of the handsomest of all the wild flowers of Michigan, and is a great success in cultivation. Excellent anywhere as an out-door ornamental for forcing or for cut flowers. Growing in dense masses in its native wilds, covering the ground with its beautiful finely divided glaucous or sea green foliage. The flowers are very fragrant, very odd and handsome, white, in racemes, attaining a height of 6 or 8 inches above ground. The root bears bright yellow tubers like large grains of Indian corn. Flowers early in May. A fine bouquet flower. Can be handled late in May and early June.

BICUCULLA CUCULLARIA; **DICENTRA CUCULLARIA**, *Dutchman's Breeches*. Leaves larger and coarser but still very beautiful, flowers larger and still more odd in form, white, yellow-tipped not fragrant, in April and May. Root bears red scale-like tubers. The two species rank among the best of our native ornamentals, and are very easily cultivated. Both prefer rich shades. Both are fine for cut flowers or forcing. In their native wilds they form large flower beds completely covering the ground with beautiful foliage and flowers, each growing by itself. In the same forest we may also find large beds of *Isopyrum binternatum*, *Erythroraium Americanum*, *Cardamine purpurea*, *Sanguinaria Canadensis*, *Deutaria disphylla*, *D. laciniata*, etc. While the rest of the ground not occupied by these natural flower beds is nearly all covered by *Claytonia Virginica*, with however many low-growing early flowering perennials, as Violets, *Uvalarias*, *Phlox divaricata*, *Hepatica*, *Hydrophyllums*, etc. A hilly forest thus covered surpasses in beauty any park the writer ever saw.

Rochester, Mich. *Willard A. Brotherton.*

(To be continued.)

THE TWO FOUNDERS OF MODERN GARDENING.

The eighteenth century was a century of revolutions. Along with a growing democracy and a new conception of things in the political world, and flowing out of a new thought in literature, came the peaceful revolution in the art of gardening, a transformation from the formal, stately, architectural method to the modern natural style.

The credit of the first executions of this work of revolution belongs chiefly to two Englishmen, Kent and Brown, who may be called the pioneers of their art. The former, William Kent, was a painter, sculptor, architect, and landscape gardener, who did nothing well until his genius perceived the principles of natural gardening and his boldness acquired the force to bring them forward. He was born in 1684 in Yorkshire, and was apprenticed to a coachmaker in his fourteenth year. Later, he

went to London, attempted portrait and historical painting and was sent to Rome to study. Burlington brought him back to England and secured work for him in portrait and wall painting. In this, he was not particularly successful. In character, his works were pronounced contemptible daubs, even Mason, the poet, and Robert Walpole, who admired his landscape gardening, pronouncing them "void of every merit." His winning manners and authoritative speech upon questions of art made him, however, the fashionable oracle in all matters of taste. According to Walpole, "he was not only consulted for furniture, as frames of pictures, glasses, tables, chairs, etc., but for plate, for a barge, for a table. So impetuous was fashion that two ladies prevailed upon him to make designs for their birthday gowns." As an architect, his work was more successful, and had considerable patronage. The staircase of Kensington Palace which he altered and decorated was thought by Walpole to be the "least defective work of his pencil." Despite his poor ability, he was selected to execute the statue of Shakespeare for the Poet's Corner in Westminster Abbey, and was appointed principal painter to the crown. Besides, he held the offices of master-carpenter, architect, and keeper of pictures. He was considered so highly that "his style," says Walpole, "predominated authoritatively during his life." Otherwise than as landscape gardener, his artistic reputation to-day depends upon this work which he did as an architect. He died in 1748. Walpole and Mason speak highly of him and by general consent he is regarded as the first general practitioner in landscape gardening. Walpole calls him "the father of modern gardening."

Lancelot Brown, known as "Capability" Brown, was born in 1715 in Northumberland. He was first employed as a kitchen-gardener, and was afterwards gardener at Stowe. Becoming Chief of Gardeners of the Duke of Grafton, his judicious formation of a lake brought him into notice as a designer and laid the foundation of his reputation. Having procured the Royal Gardenship of Windsor, he was consulted by all the nobility and gentry. At Blenheim, his easy completion in a week of one of the finest artificial lakes in the world, and other improvements brought him to the zenith of popularity. The fashion of employing him continued until his death in 1783. There was scarcely a country-gentleman who did not consult him. He himself never went outside of England but his designs which were drawn not by himself, but by his assistants, were applied for in Scotland, Ireland, and even in Russia. Mason, the poet, praises him and Walpole apologizes for not praising him. He must have been of considerable talent as his reputation attests,

but he could hardly, Loudon says, have been imbued with much of that taste for picturesque beauty which distinguished the work of Kent, Hamilton and Shenstone. In 1770, having amassed a large fortune, he filled the office of High Sheriff and became a leading man in his county. He received the name "Capability" Brown from the frequency with which he used the term in the study of his plantations.

As France and the French garden of Le Notre predominated over all Europe during the seventeenth century, so England and the English garden stood foremost in the eighteenth. The French garden was the offspring of the old classic style of antiquity and the Italian garden, and was characterized by the straight line, the rectangular form and general symmetry. The English garden, of the modern or landscape style, on the other hand, is characterized by the absence of formality, and a more or less complete adaptation of nature and nature's principles to the adornment of home and pleasure grounds. As Downing says, "it is the artistical combination of the beautiful in nature and art." Although the English are imbued to a high degree with a love of nature and the garden, they did not develop any distinctive type of ornamental gardening until the time of Brown and Kent, but were rather imitators of other styles. In their earlier days, war prevented all home improvement. Later, as woodland was removed for tillage, parks for hunting appeared, while orchards without the castle walls permitted some ornamentation in the way of labyrinths, and plants cut into monstrous figures. Labyrinths were so in accordance with the taste of this period that scarcely a garden was designed without one. Henry the First in 1123 formed the first real park at Woodstock, on a plan borrowed from the East, it is said, though the park was designed chiefly for game. The Eastern style was continued and improved upon through the time of Henry the Eighth when the gardens of Nonesuch were planted. French horticulture was introduced through wars with France, and through increased navigation, exotics from foreign lands. In the course of time, the garden became more extensive and on a more expensive scale. Bacon then recommended his ideal garden and James First planted and improved Theobald's and Greenwich. Then Charles Second became enamored with the French gardening of Le Notre. There is a story of which the truth is not known, that Le Notre came to England and laid out Greenwich and St. James. The style was certainly adopted over all England. Whether Le Notre came to England or not, his influence showed itself, but principally in the increased scale of English gardens and in greater elaboration

of detail. This garden lasted for fifty years, when William Third introduced the Dutch garden and the zenith of formal gardening was reached.

The Dutch gardening with the Italian and French are the three modern styles of architectural gardening. The Crusaders are supposed to have created a taste for building and gardening in the north of Europe, and it is known that gardening was first brought to a high state of perfection in the Netherlands. The wealth of Holland enabled the Dutch to import foreign plants, and they are famous for having carried the cultivation of bulbous flowers, such as the hyacinth and narcissus, to a craze. Their ornamental gardening differed little in design from the French, both styles being characterized by symmetry and abundance of ornament. In their flat country, however, their long straight canals and grassy terraces were distinguishing features of their style. They were adorned with trees in pots or planted alternately, and closely clipped to the utmost regularity. The quaint and grotesque were strongly characteristic and made it popular in many parts of Europe. This introduction by William of the Dutch style into England as it did in France, rendered gardening still more opposed to nature. Verdant sculpture was in great esteem. Clipped box and yew hedges, fantastic trees, splendid iron gates and rails, graduated grassy slopes, terraces and parterres, straight and broad gravelled walks, terminated by temples, statues and obelisks, heavy balustrades supporting huge flower pots, geometrical fish ponds, jets of water, diminutive islands approached by Chinese bridges, sea-nymphs and river-gods, everything geometric, fantastic and cumbrous were considered of the utmost taste in garden art. This was the condition of gardening in England when the reaction began, a reaction caused by this high state of artificiality, the advanced taste of the civilized world, and the general tendency of all Europe to a greater naturalness.

A. Phelps Wyman,

Cornell University, Ithaca, N. Y.

(To be continued.)

LAWN WEEDS.

A correspondent in the *New England Farmer* gives some interesting notes on the above subject. Although differing from Emerson in his general description of a weed, he touches a responsive chord in his remarks. He says: A weed is a common plant which grows where it is not wanted. Whether or not any particular plant is to be catalogued as a weed depends upon the standpoint of the observer. A person going into the country from the city sees fields gorgeous with the common white daisy (*Chrysanthemum leucanthemum*), which to his eyes is

beautiful. To the farmer, however, in whose hay-field it grows it is only the much-hated white weed, which he would gladly exterminate. The village man, or the suburbanite, has his own ideas of weeds. Broadly speaking, a weed is any plant other than fine grass and white clover which grows in his lawn.

Plantain. Foremost among these pests which encourage backache and foster ill-temper and profanity is the plantain (*Plantago major*). Few plants multiply with such facility, and few are harder to exterminate. No lawnmower has been devised which has any effect upon this weed. The broad, heavily ribbed leaves cling so closely to the ground that the knives pass over them in vain. You rise early several times a week, and at the risk of making yourself disliked among your neighbors, vow that you will mow the flower-stalks at any rate, yet after you have carefully mown the entire lawn, and your time has expired, you look back to see numbers of the stiff spikes flaunting their pollen-laden flowers in your face. The common plantain is given as a native of the country, with another species naturalized from Europe. When New England was first settled plantain was called "Englishman's foot" by the Indians, who said that it sprang up wherever the Englishman trod. No one who has observed the rapidity of its growth will wonder at the Indian's mistake. There is only one method of relieving your lawn of this pest, and that is to get down on your hands and knees, or hire somebody else to do so, and with a knife or trowel sever the roots below the surface, then pull the plant up. This you must do every day, and then at the close of the season you will find from a hundred to a thousand plants, according to the area of your lawn, which have defied your skill. After you have pulled up a plantain you will be dismayed to find that you have exposed a bare spot in the grass corresponding to the plant removed. Then you wonder which looked the worse, the plantain or the vacancy.

Chickweed. Another plant which will invade a large portion of the lawn unless carefully restrained is the chickweed (*Stellaria media*) is a tender trailing plant, yet it has a wonderful power of propagation, and will flourish amid conditions which will make the grass look fire-swept. The appearance of the chickweed belies its character. Its thin stems and smooth leaves seem weak and insignificant, but it pushes them through the grass in every direction until nothing else is visible. As the chickweed grows and blossoms close to the ground, the mower leaves it also unmolested as it passes over, so that the lawn can be ridden of it only by hand.

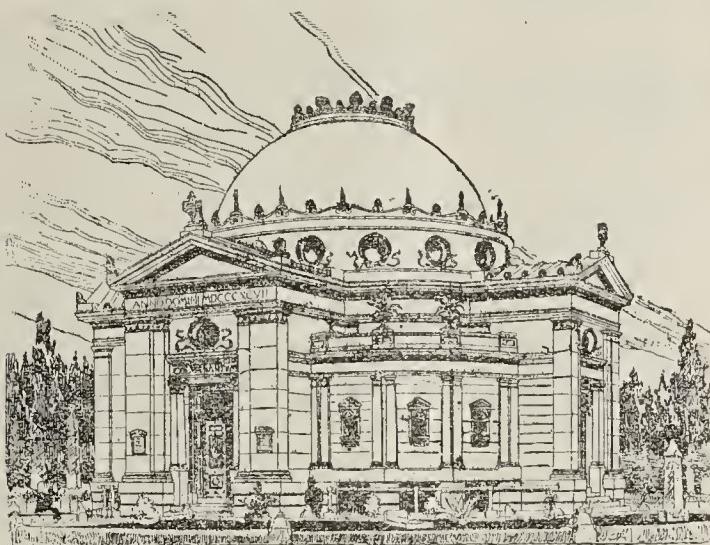
Another species of chickweed which grows in much watered lawns, and is possibly even more

troublesome, is the mouse-ear chickweed; it has rough leaves, darker than those of the common chickweed.

Dandelion. The dandelion (*Taraxacum dens-leonis*) is another common lawn weed. If worst comes to worst you can get even with this plant by eating it for dinner. It is not as difficult to eradicate as the plantain or the chickweed, although if the wind be allowed to scatter the delicate feathery seeds a generous crop will reward your negligence.

COLUMBIARIUM, SAN FRANCISCO, CAL.

Herewith is given a sketch of the Columbarium that is about to be erected at the Odd Fellows' Cemetery, San Francisco, Cal., from designs of



COLUMBIARIUM, ODD FELLOWS' CEMETERY.

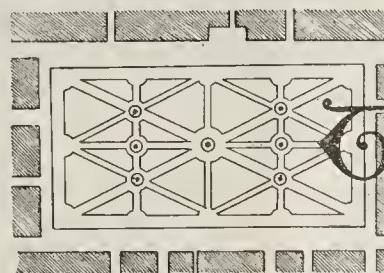
Messrs. Cahill & Condon, architects. From four to six bodies per week are cremated at this cemetery, and the ashes of some 300 people are awaiting permanent disposition.

The building will be located on the site of the old fish pond, and will occupy a space ninety feet in diameter. In general form the building will be circular, with four wings united by quadrants, making a second circle in the interior. The style will be Italian renaissance, and the walls will be of brick, covered with cement. Granite steps will lead to the main entrance, access being obtained through the handsome bronze grill doors to a monumental vestibule paved in mosaic. The cost will be about \$40,000.

The main feature of the columbarium will be the rotunda. Eight steel columns will rise to a height of three stories, supporting a dome fifty feet in diameter, and leading, by means of marble stairways, to galleries extending to the wings and quadrants. A rich effect will be produced by the art-glass coverings of all of the light openings and the marble and bronze of the tablets, panels, pilasters and cor-

nices within the dome. This will be further heightened by the presence of artistic urns of bronze or alabaster in full view from the rotunda, while back wall space will be reserved for niches for the less costly receptacles of ashes. These niches will be sold singly or in groups, and in front of each will be a marble slab bearing the name of the dead, or a bronze gate, upon which space will be left for the record of the dead.

PLAZA, ALAMEDA AND PASEO IN THE CITY OF MEXICO.



II.

PLAN OF THE ALAMEDA.

To proceed from the Plaza Mayor upon a tour of observation of the Alameda and Paseo, one has but to traverse what, in an American city, would be a single street.

In the City of Mexico, however, it is a succession of streets in direct line, with names changing with each block, sometimes having different names on each side. It starts from nearly opposite the northern side of the Zocalo Garden, as the Primera Calle de los Plateros, (first street of the Plateros.) It runs westerly and changes its name to the Second street of the Plateros in the next block. Then it becomes in succession the Third, Second and the First streets of San Francisco, and the Puente (Bridge) of San Francisco. But the Third street of San Francisco is known also, on one side at least, as La Profesa, because of the great church there located ; and the first is known also as Guardiola. There are open spaces (plazuelas or



ZOCALO GARDEN AND CATHEDRAL.

little plazas) at these points between the street and the buildings, and in pursuit of the gardening fad of 1885 the city planted tropical flowers and shrubs



THE ALAMEDA—CENTRAL FOUNTAIN.

in these places and they have since been known as the Jardines de Profesa and Guardiola respectively.

The visitor emerges from the Puente de San Francisco upon a broad street known as the Avenida Juarez running along the southern side of the Alameda. But the southern side of the avenue is known, in its several blocks, as Corpus Christi, Calvario and Hospicio de Pobres Streets.

Without opening the archeological questions as to the purposes to which the site was devoted by the Aztec occupants of Tenochtitlan; whether it was a Tianquis or market, or whether the Aztecs had use for a market, (the present writer is of the opinion that, previous to the conquest, the site was wholly submerged by the waters of the lake that surrounded the ancient pueblo,) the history of the Alameda begins with the year 1592, when the viceroy Velasco appropriated the eastern half of what is now the Alameda, as a public park, enclosed it within walls, built fountains and planted cottonwood trees and flowers therein. The ground west of it was afterwards slowly reclaimed from the marshes,, and thereon was erected the Brasero or Quemadero, (burning place,) where the victims of the Inquisition were reduced to ashes to be scattered upon the marshes beyond. The Quemadero was removed by the Viceroy, the Marquis of Croix, in 1770 and the land it occupied was added to the Alameda, thus establishing its present dimensions, which include between twenty and twenty-five acres.

The eccentric, but public spirited reformer, the Viceroy the Conde de Revillagigedo, in 1791 built a wooden fence around this enlarged Alameda. And in 1822 the discarded iron gates from the glorieta of the plaza Mayor were used to adorn it, and a ditch or acequia surrounded it. It was quite

suburban at this time, and was infested at night with footpads and assassins.

Despite this past history, the Alameda as we now see it really dates from the time of the Maximilian regime. His landscape gardener was responsible for the scheme of walks and garden plats adopted, and for the eucalyptus, ash and semi tropical trees interspersed with the original cottonwoods. It was after their designs that the rondels, carved stone seats, basins and fountains were erected. It was the work of more recent artists of less taste, to paint this stone work in glaring colors. Improvements in the Alameda have been going on of late years. Mexico is preeminently a musical city, and a band stand is a necessary feature of every place of recreation. Needless to say, therefore, that the Alameda is provided with its band stand.

The general scheme of the Alameda includes wide paths intersecting the ground from north to south and from east to west, and diagonally from corner to corner. The result combines the formality necessary to convenience of use for a pleasure ground now in the heart of a great city, with the sense of quiet and seclusion in a much frequented place.

It is the street of Hombres Illustres that runs along the northern side of the Alameda. It follows the line of the ancient causeway over which Cortez fought his way on the famous Noche Triste. On the opposite side, a recess between two churches has been improved by a garden and adorned by a statue of Morelos, a revolutionary hero, who has given his name to this plazuela or Jardin.

While the Plaza Mayor is preeminently the park of the people, the Alameda is by common consent tacitly reserved for the recreation ground of the more aristocratic classes of Mexican society.

• A. H. N.

The sweet pea, which has become a very popular flower, was first cultivated in Sicily about the year 1700, and of the four original varieties two came from Ceylon. The time to plant the sweet pea is as soon in the spring as the soil can be turned without clogging, and that usually comes early in March.

* * *

At a meeting of the British Royal Botanic society it was stated that several of the streets of Basingstoke, England, had had to be repaved owing to the flagstones having been forced out of position by an undergrowth of fungi.

* PARK NOTES. *

Spokane, Wash., has begun to improve its Coeur d'Alene park. The commission has decided to call in the services of a competent man to lay out its improved portion.

* * *

The will of Mrs. Sarah Withers of Bloomington, Ind., bequeaths \$40,000 to found a library in Nicholasville, Ky., where she was born. Some years ago she established the Withers library in Bloomington. These are memorials that endure.

* * *

Belle Isle Park, Detroit, Mich., will soon be adorned with another drinking fountain, the gift of James E. Scripps. Bronze figures of a typical newsboy and his dog, modelled by Mr. Dunbar, sculptor, will be the decorative feature.

* * *

Talking about road improvements, *The Referee* recently published a cartoon, illustrating Missouri's road system. In commenting on this, that paper says that in "1896 \$490,000 was spent in that State for road improvement, and \$600,000 for supervisors to carry out the work. In other words, it cost \$1,090,000 to get \$490,000 worth of work done."

* * *

The State agent of the Tennessee Centennial exposition, recently sent to Bristol, Tenn., to investigate the advisability of cutting down and removing to the exposition the noted Boone tree, has advised against it, expressing the belief that the tree is good to stand a century longer. The tree is still in a fair state of preservation, and still visible on it is the inscription cut in its bark by Daniel Boone almost a century and a half ago. The inscription reads: "D. Boone, Cilled a bar on tree in the Year 1760."

* * *

The decision of the board of trustees of the Missouri Botanical garden, known as Shaw's garden, St. Louis, to increase its area by the addition of 100 acres and spend at least \$150,000 upon its improvement is one on which Missouri is to be congratulated. The improvement will include the making of a "synopsis of North American flora," and it is hoped to plant representatives of every family of plants indigenous to the continent. The collection will include fully 4,000 specimens and is to embrace all the flora of the continent, except a few families of parasites that cannot be cultivated.

* * *

The second annual report of Board of Park Commissioners of Indianapolis, Ind., gives 116.62 as the acreage of parks as yet established in that city for which an appropriation of \$35,000 was made and expended on permanent improvements and maintenance. The engineer's report also shows that the park question in Indianapolis has been sorely neglected, for its acreage divided into its population gives 1,508 persons to the acre, a condition not approached by any city of like magnitude. The officials are alive to the requirements and present the question to the people in a manner that must prove of interest.

* * *

The City Council of Newport, R. I., recently accepted a trust fund of \$100, the income from which is to be expended by the Park Commission on the care of the graves of Governors Nicholas Easton and John Easton, and others in the Coddington Burying Ground. This old burial place is located on Farewell street at corner of North Baptist street, and contains the remains of many original settlers of Rhode Island. The park commission has now charge of several small cemeteries which contain remains of historic interest, and is rapidly improving them. Some of the stones in the above mentioned burial ground bear dates as early as 1675.

The shade trees of Worcester, Mass., aggregate nearly 10,000 and during the past year 198 had to be replaced owing chiefly to their destruction by horses or careless drivers. The Parks Commission find themselves unable to cope with the evil, and are invoking public sympathy in the direction of aiding in bringing offenders under the laws which are ample for the purpose. The report just to hand says: "There is an increasing demand for the planting of trees in the residential portions of the city which the commission is endeavoring to supply. * * * The attention that vigorous young trees require in training them for their proper development, and the trimming of the larger trees and their proper protection, will soon demand the service of a city forester." Why not organize a tree planting association which would devote itself to just such work?

* * *

A good deal of work has already been done at Eagle Rock Park, the romantic spot in the Essex Co., N. J., park system, two-thirds of the old buildings on the rock grounds having been demolished, and water from the West Orange mains runs to the summit of the rock. Fountains are being built and others are planned. Roads have been cut through the woods so that people can now drive from Eagle Rock to Montclair, in the shade nearly all the way. The tract has been underbrushed and cleared away from the Eagle Rock grounds for a long distance on all sides. While no permanent work is being done, the \$4,000 or \$5,000 to be spent this summer, will make Eagle Rock Park presentable. Flower beds are already laid out at different points. The view from the summit of the rock is one of the most remarkable known.

* * *

The last legislature of Wisconsin passed a law creating a forestry commission, to look into the matter of the care and preservation of the forests of the state. The commission has organized and its plans will consider the improvement and protection of the forests of the state; the prevention of all wanton and needless destruction of forests; the enforcement of laws for preservation of forests and against fire-setting; the adoption of such methods of cutting as will increase and prolong the yield of timber; the encouragement of planting and seeding of valuable trees on the waste land belonging to the state; the encouragement of such methods of forestry management as will tend to conserve and increase the water supply and to protect the wild animals of the state. Forest reserves will be established and the effort be made to repair the ravages of commerce in the timbered lands of the state. It is estimated that some 400,000 acres of forest are annually denuded for timber besides a very large acreage destroyed for other causes.

* * *

The annual report of the Board of Park Commissioners of St. Paul, Minn., gives some interesting facts. From 1891-92 when the acreage was 50, to 1897, the area has increased to 381 acres under cultivation, and when present intentions are realized it will amount to 1144 acres. The average expenditure for six years has been \$49,402.51 and the average expense of maintenance \$16,708.54. During the period 1891-94, with an average acreage of 236 the maintenance expense per acre was \$148.66; and for the years 1894-97 with an average area of 463 the maintenance expense per acre was \$143.96. The report of the superintendent includes a very interesting summary of the number and description of the various trees and shrubs under his care, and their value, together with the parks in which they are planted. This is an addition to park reports which increases their statistical value in a feature which is practically paramount. The nursery and its contents are also tabulated. The total receipts for the past financial year were \$78,544.16 which includes the balance from former year of \$32,117.36.

CEMETERY NOTES.

The City Council of South Bend, Ind., is looking for a location for a new city cemetery. Several sites have been inspected and bids received.

A bill in the Maryland legislature to give cemetery corporations and trustees powers to make repairs to lots and railings, and collect the amount expended by suit failed of passage.

Vandals have been at work in the Old Granary cemetery, Boston, evidently to secure relics, and have taken pieces from the tombstones of Hancock, Paul Revere and Sumner. Where are the authorities?

An exchange says that when once filled in, a Moslem grave is never reopened on any account. To remove the faintest chance of it being thus defiled a cypress tree is planted after every interment, so that the cemeteries resemble forests more than anything else.

The services of a landscape gardener have been secured to prepare plans for the beautifying of the old Riverside cemetery at the upper end of the town of Middletown, Conn. Funds for its improvement have been raised by the D. A. R., and the matter is now in the hands of the executive committee.

A large amount of improvement has been carried out in Metairie cemetery, New Orleans, during the past two years, some \$40,000 having been expended. The landscape effects have been heightened by the construction of small lakes and many additions have been made to the list of rare and beautiful trees and shrubs.

William J. Rainey the wealthy coal operator is about to erect a memorial to his parents, brother and sister, in the Bridgeport, W. Va., cemetery, which is better known as "Weeks." Besides this he intends to subscribe liberally for the care of the cemetery, and will contribute to the end of having all lots properly cared for.

A bicycle funeral was a recent innovation in Elizabeth, N. J. Most of the mourners, men and women, followed the hearse on bicycles from the house to Christ Episcopal church, and after the services were ended the mourners again mounted their wheels and slowly rode after the body to Evergreen cemetery, three miles distant, where the interment took place. The spectacle attracted much attention.

If the disgraceful scene enacted at Plymouth Church, Brooklyn, at the close of the funeral ceremonies of the late Mrs. Henry Ward Beecher are an index of what we are to expect at future church funerals, a peremptory advertisement of "No flowers, please" will be in order. The scramble for the flowers on the occasion cited was such that the decorations were destroyed and the police were finally called in to empty the church.

* * *

Considerable stirring up has been the result of the legislation in the Massachusetts House looking to the creation of a department in Boston for the care of the city cemeteries. A board of trustees has been appointed to take over from the Board of Health the 17 Boston cemeteries hitherto under its charge. It appears that custodians are to be appointed to take the place of the present superintendents, the majority of whom are to be relieved. This is looked upon as a step backward, and will probably result in more cemetery legislation in the near future, as it should.

The Allyn Memorial Chapel, Spring Grove cemetery, Hartford, Conn., which was built in 1883 at a cost of \$40,000, and which has been accepted by the cemetery trustees as a gift from Mrs. Robert Allyn, has been given over to experts to ascertain to what extent repairs are necessary to place it in good condition. Owing to a disappointment as to site when the chapel was built it was neglected by its owners and allowed to take care of itself, and this has resulted in serious questions as to its stability and usefulness. It is hoped that its condition will admit of restoration and with possible additions make it an important feature of the cemetery attractions.

In the 48th annual report of the Evergreen Cemetery Association, New Haven, Conn., the president again wisely calls attention to the need of a chapel, for which a fund has been accumulating now amounting to over \$7,000. He suggests that no more appropriate memorial could be erected than such a building, which to meet the requirements would cost from \$12,000 to \$15,000. He also urgently calls attention to the Perpetual Care Fund, which at present is only \$2,416. The total receipts for the past year were \$14,385.50, which included: sale of lots \$6,283.35; single graves \$311.05; opening graves \$2,125.30; care of lots \$2,666.50. Among the expenditures were: trees, plants, and such requisites, \$1,641.29, labor and salaries, \$8,072.74. There were 437 interments during the year.

Among the many novel and eccentric methods which are being adopted for commemorating the record reign, that of the Neyland Parish Council stands out as unique. No frivolous display will mark the Diamond Jubilee at Neyland, no fireworks will fizz and explode at this little South Wales village, the aged poor will go without their tea, and the children without their entertainment. But as a set-off against all these disappointments, Neylanders will be able to look forward to being carried to the grave in a jubilee funeral car, which the Parish Council have decided to purchase as a means of commemorating the sixty years of reign. The Chairman of the Council ought to show the appropriateness of the memorial by arranging his decease so that he could inaugurate the new vehicle on Jubilee Day! *Funeral Directors' Journal*, London.

An ordinance has been passed by the St. Paul, Minn., Council making it necessary to bury all bodies in a coffin and four feet below the surface. In discussing the matter the introducer said that at present there is no ordinance or statute covering the point and that burial can take place at any depth that is desired. Out on the White Bear road there is a cemetery called St. Jacob's where it was the practice during the winter to inter bodies only about a foot under the ground, with the result that the health department concluded that the health of the people is endangered by such a course. He declared that the result of this placing the bodies so near the surface and without being inclosed in a wooden or metallic casket had resulted in the most horrible desecration of the graves by dogs. The ordinance makes the penalty for violation of the provisions of the ordinance a fine of from \$5 to \$50, or incarceration in the workhouse not exceeding ninety days.

Former lot owners of Maple Hill cemetery, Minneapolis, Minn., which was condemned for street purposes over a year ago, have been wondering why they were not officially notified of the confiscation of their property and compensation awarded. The street opening commission state no legal claim will hold against the city, they having awarded \$1,000 damages at the time the streets were cut through the cemetery to Martha J. Cummings, the original owner. This award was made on the ground that the lots sold by her to the other parties interested were transferred

on the express condition that they be used only for burial purposes. The commissioners reasoned that when the condemnation proceedings rendered the different lots unfit for burial the title to the same reverted to the original owner, who alone should be entitled to damages. The people who are complaining are those who held lots in which there were no interments.

CORRESPONDENCE.

A correspondent sends the following: A lot owner in a cemetery permits a friend to bury the body of a child therein. It is probable that there had been some discussion between the parties looking to a transfer of the lot.

Nothing was accomplished. Subsequently the lot owner offered to vacate the lot and sell it to the Association maintaining the cemetery, this being permitted by the state laws.

The friend whose child was buried there threatens to enjoin any such transaction.

The deed conveying the lot to the owner contains the following clause: "Said Cemetery Association hath granted, bargained, sold and confirmed, and by these presents doth grant, "bargain, sell and confirm unto the said party of the second part, "his heirs, and assigns forever the exclusive and entire right of "interment or sepulture in the burial lot" here follows the description—

Has any reader of PARK AND CEMETERY knowledge of any similar case having been the subject of judicial decision?

LEGAL.

MINNESOTA.

The late Minnesota legislature was very active in legislation, having passed some 379 acts, original or amendatory. Mr. F. D. Willis, secretary and treasurer of Oakland Cemetery Association, St. Paul, informs us that in the compilation made in 1894 of the statutes of Minnesota the laws relating to cemetery associations occupy over twelve pages; the legislature of 1895 made a lot of amendments, and now 1897 adds five more. The laws of this year in an abstract as follows:

No. 77. An act to amend general statutes 1894, chapter 34, title 5, relating to cemetery associations.

SECTION 1. Any cemetery association legally incorporated shall have the power to accept a reconveyance from the owner of any lot or lots in such cemetery in perpetual trust for such uses and trusts as the grantor shall designate not inconsistent with cemetery purposes or the provisions of statute, and to execute an agreement to hold such lot or lots in trust for such uses.

SEC. 2. Such association shall also have power to accept and hold bequests, donations of money or other personal property in trust for such cemetery purposes as the testator or donor may designate, not inconsistent with the provisions of statute, and to execute an agreement to hold and use such money or property for the purposes designated.

No. 489. An act to legalize and regulate cremation.

SECTION 1. It shall be lawful for any and all cemetery associations in the State to dispose of dead bodies by cremation when such disposition is desired by the relatives of the deceased, or other persons legally entitled to dispose of such bodies.

SEC. 2. Every such association shall before receiving any such body for cremation have on some part of its grounds a suitable crematory for such purpose.

SEC. 3. The actuary and secretary of such association shall keep in its "Registration of Burials" a separate list and record of all cremations in like manner as required by law in cases of interment, and shall be subject to the same penalties for neglect to keep such record.

No. 257. An act entitled an act to legalize certain incorporations of cemetery associations.

SECTION 1. That in all cases where there has been heretofore an attempted incorporation of a cemetery association under the laws of this State, and the articles of incorporation have been lost or destroyed without having been properly recorded, and said cemetery association has purchased property and transacted business in its corporate name from the time of the purchase of such property and is now assuming to act as such cemetery association and using the property so purchased for a cemetery, such attempted incorporation of such cemetery association, under the name assumed, is hereby legalized from and after the time of the execution of the deed to it of the property so used by it as a cemetery, notwithstanding the omission of any matter or thing prescribed to be done or observed in such incorporation. And any and all conveyances of property, real or personal, in good faith and lawful form, made to or by such cemetery association, under the corporate name assumed, and any regulations, rules or by-laws by it adopted are hereby legalized and declared as valid and effectual.

SEC. 2. Prescribes the procedure to be adopted to obtain articles of incorporation and to effect registration.

SEC. 3. Nothing in this act contained shall affect any action or proceeding now pending.

No. 804. An act to amend section 1 of chapter 168 of the general laws of 1887, entitled an act "to provide for the establishment of permanent funds for the care, maintenance and improvement of cemeteries.

SECTION 1. That section 1, as above, be and the same is hereby amended to read as follows:

SECTION 1. That any association formed under law of 1878, which shall have established and shall be maintaining a cemetery of more than twenty acres in extent, may by a two thirds vote of the trustees of such association, which vote may be taken at any regular meeting of such trustees, provide in accordance with the terms of this act, for the establishment of a permanent fund, the income whereof shall be devoted to the care, maintenance and improvement of such cemetery, which fund shall be known as "permanent care and improvement fund" of such cemetery association.

* * *

RIGHT TO VISIT AND CARE FOR CEMETERY LOTS.

An important decision is contained in the latest issued volume of Illinois Appellate Court Reports, bearing on the rights of cemetery lot owners. This was an appeal from a conviction of and fine of \$10 for assault and battery. The proof showed that the personal violence had been inflicted upon a woman who was about to go into a cemetery with a bucket of water and a sprinkling pot for the purpose of caring for six or eight lots, under an arrangement she had therefore with the owners, to keep the graves and flowers thereon in proper order. She also claimed the right to go in because her husband was buried there. The defendant on the other hand, contended that he was justified in doing what he did in order to keep her from entering the cemetery, of which he was superintendent. He insisted that she had given him trouble by meddling with other lots and graves, and that she remained after hours on one occasion. Moreover, he tried to make something on the point that the cemetery association was a purely private corporation. But the appellate court took the woman's side, and affirmed the judgment rendered against the superintendent. It says that granting that the charter of the association conferred a private franchise, yet the use made of it must, necessarily, impress it with a public character in some degree. And it adds: "When lots are sold for burial purposes the purchasers certainly acquire the right to visit the same and to improve and care for them. This may be done in person or by agent. A great number of persons thus acquire an actual right to go there during proper hours and for proper purposes. In order that this right may be the better enjoyed, convenient walks and driveways are provided and the public are admitted without distinction. This is customary and accords with the general sense of propriety. Of course those so admitted, must observe the decorum of such a place. The superintendent may exclude or reject any whose presence or conduct is unseemly or indecent." Applying these principles to this case, the court does not consider that any good reason was shown for excluding the prosecuting witness, nor that, in any view of the case, as shown by the record, were the superintendent's acts justified.

Association of American Cemetery Superintendents.

G. W. CREEZY, "Harmony Grove," Salem, Mass., President.
ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., Vice-President,
F. EURICH, Woodlawn, Toledo, O.
Secretary and Treasurer.

The Eleventh Annual Convention will be held at Cincinnati, O., Sept. 14, 15, 16 and 17.

Publishers' Department

Park Commissioners and Cemetery trustees are requested to send us copies of their reports.

Photographs and descriptive sketches of interesting features in parks and cemeteries are solicited from our readers.

WANTED. The publisher of Park & CEMETERY would thank subscribers for the address of architects who have made plans for receiving vaults, chapels, etc.

The regular midsummer meeting of the Indiana Horticultural Society was held at Pendleton on June 15, 16. In the course of an interesting programme Prof. T. F. Monson of Purdue University read a paper on "Two Educational Ideas."

The American Association of Nurserymen at their recent convention at St. Louis, Mo., selected Omaha as the next place of meeting and elected the following officers: President, Irving Rouse of New York; vice-president, E. Albertson of Indiana; secretary, George C. Seager of New York; treasurer, N. A. Whitney of Illinois. Executive committee: C. L. Watrous, Iowa; R. C. Berckmans, Georgia, and F. H. Stannard, Nebraska.

A CORRECTION.

In a cemetery note on the Marion, O., Cemetery, at top of page 70, last issue the number 18,000 should read 8,000, which, as Mr. Sharpless says, "makes quite a difference."

William Wells, a Chicago florist, has been appointed Superintendent of the three Chicago North Side Parks under the control of the city, Washington Square, Oak Park and Green Bay Park.

The Lincoln Park commissioners, Chicago, have appointed Charles W. Andrews superintendent of that park. The appointment is based on business ability only and is arousing keen indignation, as it should.

OBITUARY.

John Saul, the well known Washington, D. C., nurseryman and florist, died at his home near that city on May 12. He was born at Lismore, Ireland, Dec. 25, 1823, and in due course finished his education in landscape gardening, and was engaged in active nursery work in England until 1851, when he left for Washington, United States. Under the government he laid out the grounds of the Smithsonian Institute and was employed by the late W. W. Corcoran. In 1852 he purchased the property on which he spent the remainder of his life, devoting his time principally to the cultivation and sale of orchids and rare decorative plants.

ROBERT DOUGLAS.

Robert Douglas, the well known nurseryman of Waukegan, a man of national reputation on arboriculture, died suddenly in Waukegan, recently. He had been ill with pneumonia but had apparently recovered. After dinner and while sitting in his office he quietly passed away. He was born in England 84 years ago, and had lived in Waukegan since 1844, most of the time engaged in the nursery business. He was an authority on forestry and arboriculture and gave valuable assistance to the Forestry Commission in preparing reports for the censuses of 1880 and 1890. He left three sons.

RECEIVED.

Second Annual Report of the Board of Park Commissioners of the city of Indianapolis, 1897. Illustrated.

By Laws and Regulations of the Odebolt Cemetery Association of Odebolt, Iowa.

Flushing Cemetery, Flushing, L. I. Descriptive Illustrated pamphlet.

Cypress Lawn Cemetery, San Mateo Co., California. A beautifully illustrated descriptive pamphlet, containing also By Laws Rules, Regulations, etc.

The 48th annual report of the Board of Directors of the Evergreen Cemetery Association, New Haven, Conn. With the reports of the Secretary, Treasurer and auditors for the year ending Feb. 1, 1897.

Annual Report of the Parks Commission of the City of Worcester, Mass., for the year ending Nov. 30, 1896. Illustrated.

Sixth annual report of the Board of Park Commissioners of the City of St. Paul, for the year ending March 1, 1897. Illustrated with many half tones.

General Catalogue and Garden Guide for the south of the Southern California Acclimatizing Association, Santa Barbara, Cal. Comprising summary description, Degree of Hardiness, Hints to Culture of 1500 sorts of Plants. The general object of this association, under the general management of Dr. F. Franceschi, is to promote knowledge and taste for horticulture all over the United States and particularly in the south. The association has been the means of introducing a large number of new plants and varieties, and have recently received an order from the Royal Gardens of Kew, England, for 50 different species not in its collection. Wherever there is a conservatory this catalogue can be of service.

CORNELL UNIVERSITY AGRICULTURAL EXPERIMENT STATION, ITHACA, N. Y.

Bulletin 131. March 1897. Notes upon Plums for Western New York. By S. D. Willard and L. H. Bailey.

Bulletin 132, March, 1897. Notes upon Celery. By B. M. Duggar and L. H. Bailey.

Teachers Leaflets on Nature Study prepared for the Rural Schools by the Agricultural Experiment Station of Cornell University, Ithaca, N. Y. Nos. 1, 3 and 6. These very instructive leaflets are by enactment only for the use of the State of New York, but by permission of the Department they may be obtained at low rates from the printer, W. F. Humphrey, Geneva, N. Y.

An Andover, Mass., Exchange says: Keep the ball a rolling; don't let the

interest flag in village improvement and all of its kindred local development. A village green, an historical and geological reservation, and a beautiful Carmel Park, are all in prospect as the outcome of the splendid campaign for a more beautiful Andover. Each object gained will bring the next one all the sooner. "Do the next thing."

CASKET LOWERING DEVICE.

The casket lowering device advertised in this issue by O. S. Osborn & Co., of Milford, Ill., has been in successful operation for eighteen months. Its manufacturers, who have long been identified with the undertaker's profession, gave the device thorough tests before engaging in its manufacture, and offer every assurance of its entire success. It possesses many points of superiority over other devices, not the least important being the price. Circulars illustrating and describing the working parts of the device will be sent on application by the manufacturers.

LAWNS AND GARDENS. By N. Johnson Rose, with plans and illustrations by the author. G. P. Putnam's Sons, New York, 1897.

A large amount of practical information is contained within the covers of this book, as might be expected from the pen of a practical gardener, able to express himself with intelligence and force. It is written with a view to give practical information looking to the improvement of home grounds and surroundings, and as an aid to every owner of a country residence, village improvement societies, landscape gardeners and young students. To the lover of gardening it is an addition to his library of practical worth, the author offering his information from a varied experience from the Royal Gardens at Kew England, through extensive travel to study the art of landscape gardening, to his present charge of the Morristown and Riverside Parks, under the Park Commission of New York City. The work contains some 400 pages with 172 illustrations and plans. It describes the use of surveying and leveling instruments; methods of grading and modelling ground surface, gives suggestions on the study of natural scenery, on the grouping and massing of trees and shrubs, making flower beds and borders etc., etc., and concludes with a description of the better trees, shrubs and their plants useful in various situations in this climate.

Like the Colors of the Rainbow. Edging Plants coming from Pampas Grove, Greenland, Fla., charming, bright, compact growing foliage plants. Send for a list or 10 cents for sample dozen.

ENGLISH IVY, FIELD GROWN

2 years old \$1.10 per 10, \$8.00 per 100.
1 year old 60 cts. per 10, \$5.00 per 100.

Sample by mail 15 cts. Cash with order.

J. H. DANN & SON, Florists, Westfield, N. Y.

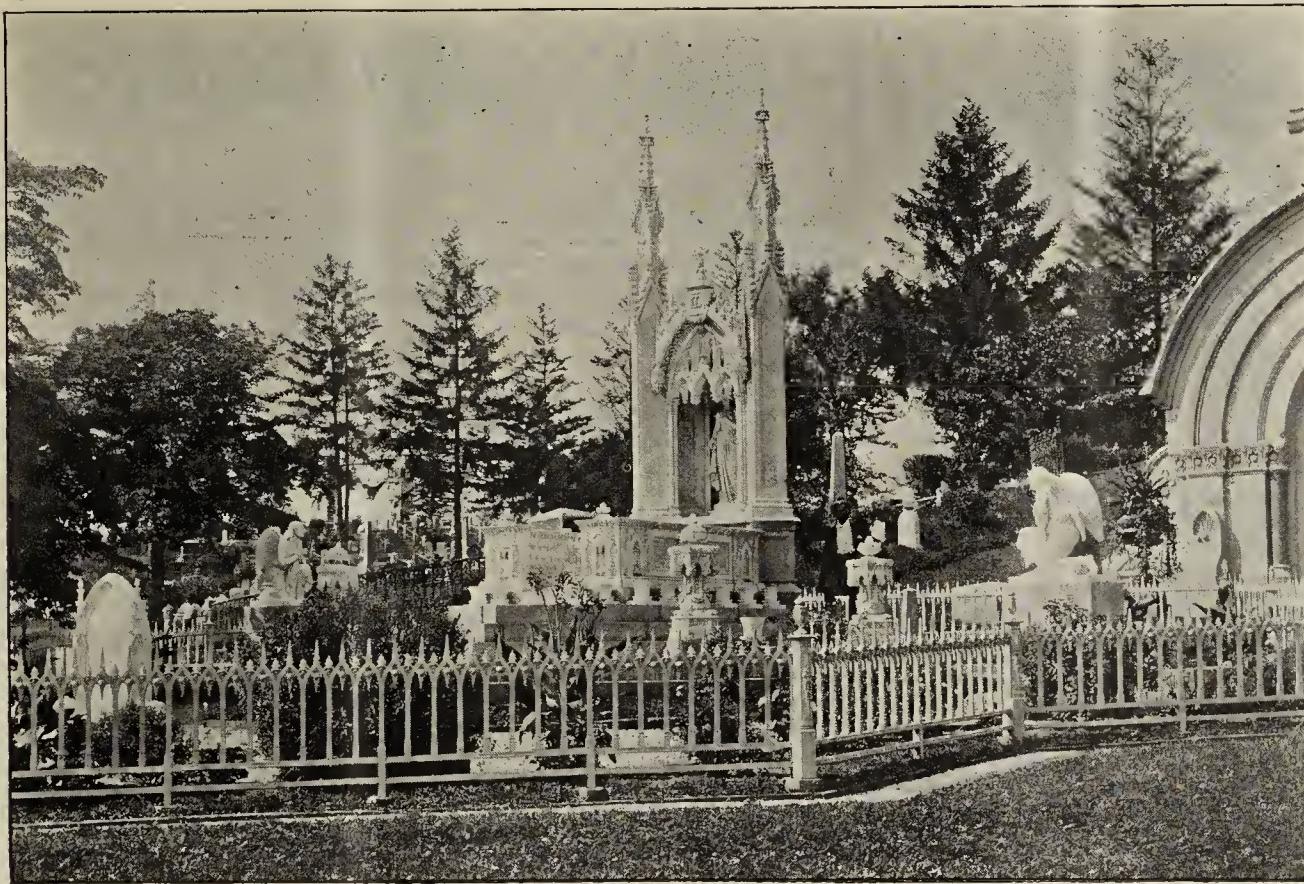


Aquatic Gardening

Water Lilies, Egyptian and Japan Lotus, Victoria Regia.

We carry a full line of Aquatics, Japan Irises, Bamboos and hardy Ornamental Reeds, Grasses and Perennials suitable for water gardens. Plans and estimates furnished, and sketches of varieties made upon request. See catalogue and separate Water Lily Leaflet, (free).

HENRY A. DREER,
PHILADELPHIA, PA



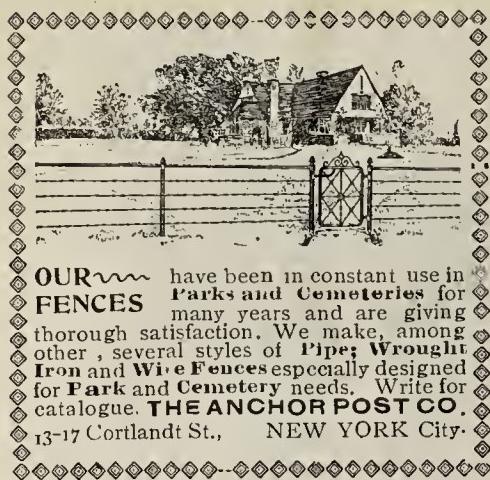
THE "CANDA" MONUMENT, GREENWOOD CEMETERY, BROOKLYN, N. Y. RESTORED AND PERMANENTLY
PRESERVED BY THE 'CAFFALL' PROCESS 1887. PHOTOGRAPHED, AUGUST, 1896.

PERMANENT PRESERVATION OF MONUMENTS.

In no other places are the disintegrating influences of the atmosphere more apparent than in our cemeteries. Here the "Tooth of Time" soon leaves its impression upon what are regarded as the most enduring structures. The porosity of all stone, and especially the finer grades of marble makes inevitable the absorption of water and its penetrating sulphurous and carbonic acid gases. Add to these the a ternite freezing and thawing of our winters, and the cause of decay is readily understood. The successful waterproofing of the obelisk in Central Park, New York, and many of the finest memorials in "Greenwood," Brooklyn, "Woodlawn," New York, and other well known Eastern cemeteries leaves no doubt as to the effectiveness of the process used to render the surfaces of stone non absorbent, and consequently imperishable. The beautiful Canda monument illustrated above, which showed plainly the effects of severe weathering prior to 1887 was treated with the waterproofing, and stone preserving process in that year, and in Mr. C. M. Perry comptroller of "Greenwood" cemetery who has had excellent opportunities for watching the results of this preservative during the past fifteen years unhesitatingly certifies to its great value, while Prof. R. Ogden Doremus, the eminent New York scientist, and many other scientific men give it their endorsement after careful investigation. The processes of renovating, hardening, and waterproofing the surfaces of stone are patented by Messrs. Caffall Bros., of New York, who have had a practical experience of over 30 years in successfully restoring and preserving various kinds of building and monumental materials. The method of applying the preservative is an interesting process, and is fully described in a pamphlet that will be sent to monument dealers and cemetery officials on application. Caffall Bros., Hartford Bldg., Union Square, N. Y., or their Western representatives, Turner & Co., 730 Unity building, Chicago, are desirous of corresponding with persons who may wish estimates for applying their preservatives to monuments or buildings of any description.

ANOTHER VOCATION FOR WOMEN.

The New York *Commercial Advertiser*, speaking of landscape gardening for women, says: It seems a little strange that women, seeking professions in which to earn a livelihood, have never taken up that of landscape gardening. It is one for which their instinctive taste, their artistic perception of form and color would pre-eminently fit them, and it is one, moreover, for which they are physically fitted, as the labor is not arduous, and the benefit of much outdoor exercise and fresh air would go with it. The profession of visiting gardener would be a profitable one for an intelligent girl to take up. The many beautiful gardens which surround handsome country homes require great care, and are filled with costly plants. When these become diseased the gardener in charge, who is too often an uneducated man, can give no reason for it, and still less is able to prescribe for them. What is wanted is a woman doctor of flowers, who would understand the diseases of plants and the proper remedies, and the chemistry of the soil, and who would be fitted to deal intelligently with the subject. All this would be strictly in line with landscape gardening. Already there is one young American girl who has taken up this profession, and is deemed a success in work demanding a high degree of skill. In England a Miss Wilkinson has made a notable success of landscape gardening and the beautifying of many of the parks around London have been the result of her deft designs. Probably in no other city in the world are there so many beautiful gardens as in New York, and it offers a chance to capable women landscape gardeners.



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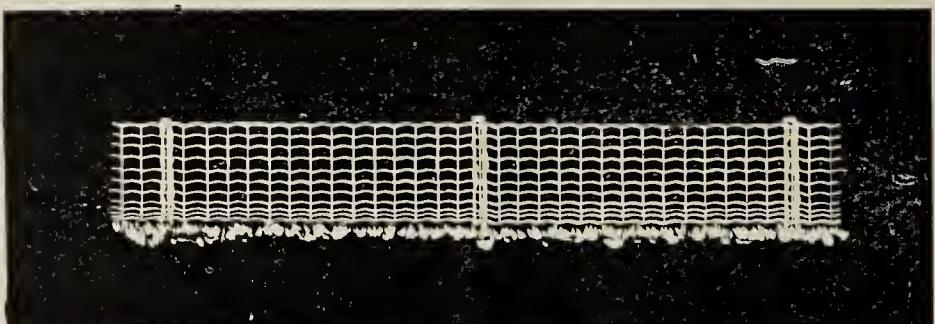
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CONTENTS.

EDITORIAL—FAIRMOUNT PARK ART ASSOCIATION—PERPETUAL CARE—A PROPOSED MAUSOLEUM CO.—PUBLIC MONUMENTS—	
SOLDIERS MONUMENTS.....	99
THE INFLUENCE OF TRAVEL ON THE GARDEN.....	100
FORMING STATE ASSOCIATIONS OF CEMETERY OFFICIALS.....	101
*A MEMORIAL FLOWER SERVICE.....	102
*WASHINGTON PARK, ALBANY, N. Y.....	103
DISPOSING OF THE DEAD IN THE FRENCH CONGO.....	104
*NATIONAL CEMETERY, GETTYSBURG, PA.....	104
OLD KING SOLOMON.....	106
*MEMORIAL SCULPTURE.....	107
*GARDEN PLANTS—THEIR GEOGRAPHY XX.....	108
THE TWO FOUNDERS OF MODERN GARDENING, II.....	109
*THE SCOTCH THISTLE.....	112
CEMETERY TOPICS.....	113
*PLAZA, ALAMEDA AND PASEO IN THE CITY OF MEXICO, III.....	115
THE IDEAL PARK SUPERINTENDENT.....	116
MICHIGAN'S EARLY WILD FLOWERS II.....	118
*THE OLE BULL MONUMENT, LORING PARK, MINNEAPOLIS, MINN.....	120
PARK NOTES.....	121
CEMETERY NOTES.....	122
CORRESPONDENCE.....	123
PUBLISHERS' DEPARTMENT.....	124

*Illustrated.

IF the true measure of a community is the measure of the things for which it cares, the record of which is perpetuated in its art, so as Leslie W. Miller also says, no better service can be rendered to the community than the promotion in every possible way of those forms of culture, and the cherishing of those ideals, which find expression in art. This thought appears to be the moving spirit of the Fairmount Park Art Association of Philadelphia, whose recent acquisition of the group of "Dickens and Little Nell" adds another pleasing work to the many that have been provided through the instrumentality of the association, for Fairmount Park and the city of Philadelphia itself. Other large cities of the country taking the above thought as a text, and it is true if history be true, might well organize a like association and endeavor by righteous emulation to do for their communities what the Philadelphia Association has done.

THREE is one portion of the majority of cemeteries which, in a certain sense, is looked upon as a stumbling block to perpetual care—that containing the single graves, the Potter's Field, or perhaps both—and especial care is usually taken to advise lot owners or would-be purchasers that such a portion is exempt from the provision. The conclusion is as repugnant to modern ideas as perpetual care and the lawn plan are harmonious therewith. The age demands as careful consideration of one class of human beings as another, and every progressive thinker experiences the truth of this in his own reasoning. But, however cemetery corporations or officials may desire to deceive themselves as to the due and proper attention necessary for such portions of a cemetery, nature herself works to destroy the harmony of the plan unless equal care is bestowed upon rich and poor sections alike. It may be safely asserted that much harm will be done to the future of any cemetery, should any portion of it be left to take care of itself; and not only in a material way, but as generation after generation becomes wiser, as truly they will, the ignorance and neglect of this generation will be reflected back upon it in measures that will surely upset the plans of the present day promoters. On the face of it, it would appear that in the effort to promote a general interest in perpetual care, it should be forcibly maintained that provision will be made for the care of the entire cemetery. To have a suspicion that certain portions will be left uncared for, for from whatever cause, will help to lead thinking people to doubt the ability of the present generation to perpetuate a tract, part of which is beautiful and part a jungle, or worse.

THE Board of Health of New York City has approved the plans of a new mausoleum company, which proposes to establish a Sanitary Mausoleum near High Bridge, with a capacity of from ten to twelve thousand bodies. The idea is to seal up the dead in cement receptacles, after exposing the bodies for several months to a current of air made chemically pure by passing it over sulphuric acid and afterwards by fire. When the body is thoroughly dessicated the receptacle is to be made air tight. The sanitary authorities are reported to be well pleased with the proposed scheme, which avoids so many of the objectionable features of earth burial. It is proposed to erect a building 270 feet long, 75 feet deep and three stories high. The receptacles will be formed of concrete, four inches thick and jointless, in size a little larger than an

ordinary coffin. The facilities of the cemetery chapel and other such accommodations will be provided for.

IN other columns will be found two examples of memorial monuments, excellently suggestive of what can be accomplished for portrait monuments designed for exposed situations. The desirability of busts for portrait statuary is in very many cases self apparent. To reiterate the well worn argument, modern garments do not lend themselves to artistic sculpture in a general sense, although genius can and does give us work in which the comparative unsuitableness of attire is lost in the positive intention of the work of art, displayed in pose, arrangement and expression. But the bust monument in a sense does away with the incubus of artistic treatment of the attire, and allows free scope to the sculptor to devote his art to the high qualities of the person as represented in his bust as a whole; while the possibility of making the work monumental by representative accessories about the pedestal, makes it possible to secure artistic as well as characteristic monuments, adapted to public requirements both as to situation and proportion. For the best results in public places, the sisters, sculpture and architecture work hand in hand, and it is to this blending of artistic suggestions that the comparatively few really great monuments we have owe their distinctive qualities of great works of art. The other example of a cemetery memorial may be left to speak for itself.

THE soldiers' monument recently unveiled at Pawtucket, R. I., suggests a word on soldier's monuments generally in view of many more to come. This monument and a very few others are distinguished particularly by their marked departure from the style of monument which has become conventional and common place. So much so, that could the majority of our soldiers' monuments be gathered together in company, it would appear as though our monument designers were men of very limited ideas. When we look over the field and note the shaft monument, shafts with surrounding statues, shafts surmounted by single figures in attitudes which have become stereotyped, we have a sameness which is positively distasteful and reflects seriously on the taste or lack of taste and knowledge which such a condition bespeaks for the committees or authorities in charge of such public memorials. Excellent examples have been produced, though unfortunately few in number, of what can be done in the way of ideal statuary for soldiers monuments; statuary that conveys a meaning, or emphasizes a quality of human nature, which shall teach a lesson for all time. The duties

and dangers of a soldier's life,—endurance, sacrifice, devotion, heroism, suggest a thousand poses and methods of treatment, that may be given as many meanings by the qualified sculptor, and thus lend to the making of such memorials enduring representations of the virtues that find expression in the patriot soldier. The bulk of what we have are simply effigies; judged by their best examples they are but models of the routine of a soldiers' life. They may keep the memory green in the breast of the mourner, but their constant recurrence tends to create a lack of respect for their sponsors, and by extension of the idea, less appreciation of the facts they represent. It is time the soldier on guard, the soldier at parade rest, the soldier color-bearer, and the soldier at a perpetual attention, give place to some originality, wherein the soldier's deeds could be extolled, not by meaningless effigies, but by single statues or groups, in which a virtue or idea connected with the soldier's patriotism might be handed down in imperishable material, not only "in memoriam" of the deeds performed, but suggestive of what kind of a man the soldier of the war of the rebellion was among his fellowmen. For we must keep before us the fact that our soldiers' memorials are not alone for this generation.

THE INFLUENCE OF STEAM TRAVEL ON THE GARDEN.

There can scarcely be a doubt but the railway and the steamship have been inimical to the progress of fine private gardening during the last half century. This seems particularly true in countries which are not centres of attraction to the tourist, and whose inhabitants have no especial desire to render them so. Fine gardening is to be seen, and travellers can see it and enjoy it in the centres of population more fully and more cheaply than they can maintain it.

Thus the park and the cemetery have made progress, while the residential gardens have declined in very many cases, until to-day they rank but little above florist's establishments. There are a few exceptions where the proprietors garden for the love of it, but it remains true that the great majority of those who can travel, care but little for their gardens beyond the *cut* of flowers, fruits and vegetables. The fine art of gardening can be more fully enjoyed by them elsewhere than at home. There are few indeed who have deliberately set out to produce a phase of garden scenery to which their children may point with pride; few indeed but feel it would be a most uncertain and hazardous undertaking. Perhaps this is due more to republicanism, than to the introduction of steam.

Republican tendencies however ought to be sin-

gularly helpful to the public garden and park; if they are not, then it is due to that species of jobbery known as politics. There is no end to the trickery which so simple a proposition as the formation of a park may engender. Simply done it is the painting of a picture on the ground, with the varying colors of trees, shrubs, plants, rocks, water, and maybe a building or two.

Paper work is not necessary to the finished gardener; yet, often, paper work is the only matter receiving the attention of the political huckster, or his creature of Agri-Architectural proclivity. Thus it is usual for several million dollars to be spent on a parcel of ground, *primarily designed to grow a few thousand dollars worth of trees and plants*, without which all the so-called "improvements" would be barrenness.

It is a remarkable phase of "Public Parking" that but few appreciate its essentials, and properly encourage their use. Thousands upon thousands can be frittered upon roads and bridges, refectories and sheep-folds, retreats and hanging gardens of Babylon, while there is not a single garden in the whole world to illustrate the science of plants in a comprehensive and pictorial manner. *J. MacP.*

FORMING STATE ASSOCIATIONS OF CEMETERY OFFICIALS.

State Associations of Cemetery Officials are undoubtedly, in the writer's opinion, steps taken in the right direction and it is pleasing to note that Nebraska has taken the initiative, but experience teaches that it is the older that require instruction in modern cemetery work as well as the newer states. Wherever the Cemetery Superintendent's Association has met, it has been productive of good in the management of burial grounds, in the cities and large centres.

But sad to state the lesser, or as they may be called the "Rural Cemeteries" remain in their neglected condition. Let us look into the cause of this. In most of these smaller burial places there is no income, consequently there is no person in actual charge. The interest of those having friends lying therein is divided; they do not care for the cemetery as a whole, they simply care for the small space occupied by their dead, which may be cared for or not, as the case may be. But caring for the whole cemetery is a matter out of their range. In some instances there is a small endowment attached to the place, which enables the grass and weeds to be kept cut down once or twice a year. Now, in the writer's view it is to the benefit of these Rural cemeteries that the State associations could best turn their attention. The association will naturally try to gather into its fold the officials connected

with the larger cemeteries, and there is a lamentable lack of cemetery lore even among this class. As they become educated, they should do missionary work among the lesser burial grounds, and where there is no person in actual charge, induce the women of the neighborhood to take interest. It would not take these ladies long to devise some method for raising the requisite funds for keeping the grounds in order. The main thing is getting some one interested. The rest is easy. Once get interest awakened in the care of the cemetery, and the pride of the residents in that locality will be aroused and our country burial grounds will be beauty spots, instead of blots. This has been demonstrated all over the continent. See what has been accomplished by the ladies of Bloomington, Ind., as reported at the last meeting of the Association of American Cemetery Superintendents by Mrs. Eudora Shoemaker, and noted on page 38 of the report.

Other instances come to mind, notably, one where the ladies raised by means of a bazaar a sum sufficient to endow their cemetery, the interest on which though small, enables them to employ a handy man all the summer. Their next move is to get money to build a small receiving tomb. What these ladies have accomplished can be emulated by others. It only requires some one to give the thing a start. Here is work for the State Associations.

It is a well-known fact that the superintendents of the larger cemeteries are busy men, and cannot well be spared from their arduous duties, but the writer does not know one of these busy men who would not willingly advise, free of charge, with his brethren of less degree, to enable them to improve and beautify their small portions.

Last year while visiting in Central New York with its innumerable small towns, it was astonishing to see how many old fashioned burial grounds there were with but little attention bestowed upon their care. In one thriving town of 2000 inhabitants, the man in charge was the local furniture dealer, and undertaker, and from the very order of things naturally the person most interested in the good appearance of the local cemetery. The ground had been, as is generally the case, bestowed by a church member and no charge was made for burial lots. At the request of the before mentioned dignitary, the writer paid a visit to the cemetery, and found it no worse than expected. The official had a good eye to business, and had scared up several of the leading lights to meet us. It did not take long for a person of experience, to see how the place could be benefitted with small outlay and after a short talk it was astonishing how deeply interested all present became. It was unanimously resolved to carry out

PARK AND CEMETERY.

the ideas imparted and it is gratifying to know that the good work went on. Now that official considers himself a full fledged cemetery superintendent giving himself all the requisite airs. Within a radius of 25 miles are several other towns, the inhabitants of which, not to be outdone by their neighbor, are taking more pride in their local burial grounds. Hence the force of example. Oh! what an opportunity for mission work by a state association.

During the past summer the wife of a leading citizen of a small city in Illinois, after attending a funeral, on her return home, was so horrified at the primitive manner in which her friend had been interred that she made her husband promise that in the event of her demise, that her remains should be taken to St. Louis, the nearest large city. The matter occasioned talk from time to time until finally the husband determined to correspond with a well-known cemetery man, and see whether something could not be done on their own premises. To make use of his own words: "If we only knew how to make a start." The cemetery man paid a flying visit; to his experienced eye, making that start was a very simple matter; an association was quickly formed by the most prominent citizens, the necessary funds cheerfully subscribed for developing a 20 acre tract adjoining the old burial grounds. In a few weeks a beautiful cemetery occupied the site of a cornfield and slough; the requisite, up to date books for properly conducting were obtained from PARK AND CEMETERY, and now, there are not many cities that can boast of being possessed of a more modern and beautiful place of sepulchre. The interest of the residents for miles around has become aroused, several have removed their dead from country burial grounds and it will not take long before the place will be free from debt. The City Fathers have also been awakened, seeing the popularity of the new cemetery and have opened up and graded a splendid thoroughfare as a means of access.

While not desirous of introducing politics or creating a public office, yet if the solons of the different state legislatures could be induced to make a small appropriation to enable the State Association to do missionary work, the writer is convinced that beneficial results would speedily follow.

Bellett Lawson.

A MEMORIAL FLOWER SERVICE.

Lakewood Cemetery, Lake City, Minn., witnessed the inauguration of an annual Memorial Flower Service on Sunday, June 27, which was participated in by all the protestant clergymen, whose churches were closed for the occasion, and which created a profound public interest. It was a

unique celebration, in which the active interest of the lotowners was successfully engaged, and promises in its annual repetition a great good to the cemetery itself, besides a greater good to the community in refreshing their intelligence on the deeply rooted associations of those "now sleeping." A regular programme was carried out, a programme designed to invoke higher thought, enrich tender memories and make the occasion a permanent inspiration.

The Board of Trustees of Lakewood Cemetery, acting upon the suggestion of Mrs. Anna B. Underwood, wife of the secretary and superintendent of



the association, encouraged the proposition, which was set forth in the little Annual published in the spring by the trustees.

The lady above mentioned also originated and took a prominent part in a Floral Bazaar, which netted \$900 to be applied to a fund for perpetual care.

The success of this service and entertainment is full of suggestiveness beneficial to cemetery affairs in all small places. It clearly demonstrates that interest in the cemetery, while apparently dormant looking at the conditions so generally prevailing, is ready to promptly meet active effort, and to respond cheerfully to reasonable demands. It also shows that in such matters woman's judgment, woman's sympathy and energy are powerful factors to be relied on, and in no direction can they be more successfully exercised them in the improvement and care of our rural cemeteries.

The illustration herewith shows the floral decorations of two of the memorials in Lakewood taken at the time of the service.

Bisulphide of carbon placed in the ground at or near the ant-hills will destroy the insects. Take a dibble or sharp stick and thrust it into the ant-hill, making a hole six or eight inches in depth; into this pour about two tablespoonfuls of the bisulphide, and then press the soil together at the surface to close the hole. The fumes of the liquid will penetrate the soil and kill the ants. This is the most effective of all the means that have ever been employed for this purpose.—*Vicks' Magazine for July.*



WASHINGTON PARK, ALBANY, N. Y.

THE LAKE.

BOAT HOUSE.

CROQUET GROUNDS.

AN AVENUE.

BURNS STATUE.

A BEAUTIFUL OUTLOOK.

A QUIET NOOK.

BIT OF LANDSCAPE.

BED OF PAMPAS GRASS.

WASHINGTON PARK, ALBANY, N. Y.

That there is something in diversity of scenery to enhance the recreative and exhilarating effects of a well developed and carefully maintained park, a study of the above group of views will surely demonstrate. It will further prove that the reputation of Washington Park, Albany, N. Y., is well deserved. All persons visiting Albany carry away lasting impressions of its splendid park features, impressions that lead to expression, with the result that its Washington Park has become known far and wide as a worthy example of American park practice, wherein landscape art in connection with the requirements for the higher recreation of the people, have been developed to a degree affording general satisfaction, and leaving little to be desired other than the continued improvement which

constant care under careful superintendence will assure.

We are indebted to the members of the Albany Camera Club, through the courtesy of Dr. Frank W. Cady, for thirteen views of the park, all excellent examples of the photographic art, from which the above were selected. The club may be congratulated upon the magnificent field it possesses in Washington Park for the practice of the art of photography. Landscape art never more assuredly asserts itself than when it remains impressive under all conditions of time and season, and to this end the landscape designer will more and more devote himself, seeing the wealth of material that he has at hand, and that in a general sense he is unhampered by precedent or rule other than the broad limits which Nature herself sets with undeviating hand.

DISPOSING OF THE DEAD IN THE FRENCH CONGO.

A writer in the *New York Times* gives the following interesting account of some of the methods of disposing of the dead in the region of the French Congo, Africa : "The natives of the French Congo have different methods of burial. A dead slave is simply thrown into the bush as food for hyenas and other wild beasts. There was a place of this kind within a quarter of a mile of the old mission-house near Mayumba, and the first missionaries collected the bones and buried them. The body of a convicted criminal who is killed by the witch doctor with sasswood is also thrown away.

"Common persons are buried the day after death in one of the huts in the town. A hole about eight inches deep is dug and lined with leaves. Then a mat about five feet long and three to four feet wide is put in, and the body, after being wrapped in five yards of cotton cloth, is placed on it and covered with another mat, more leaves, and the soil that was taken from the excavation. This burial is only temporary, until the witch is found who caused the death. This takes days or weeks, the time depending largely upon the pay the doctor receives. If the pay is large, he takes a longer time, because there will be plenty of rum for him, and this is about all he cares for. If the relatives are poor, the doctor soon finds the witch, and then the body of the dead man is placed in a grave on the edge of the forest.

This grave is deeper than the first, and after it is filled sticks are fastened across it, and if stones are available these are used to secure the grave. It is necessary to do this, or the hyenas would soon find the body. Rich persons have a monument over their graves, but common folk cannot afford this. They place some of the dead person's property upon the grave instead. A plate, a pitcher and a spoon usually are the articles one finds. These things are sacred. No one will steal them, or even exchange them for broken ones.

Kings and rich persons are not buried so soon. It often takes weeks, months and even years before they rest in their graves. Their bodies are preserved in a kind of way, but since the natives seem able to stand any amount of all kinds of offensiveness, it does not matter to them at all how much time elapses before the burial takes place. Many yards of cloth are wound around the body, sometimes sixty yards or more, and after this the body is placed in a box as large as possible. One that we measured for Mongovy Gernando measured 7 feet long by $2\frac{1}{2}$ feet wide and 3 feet deep. The box is put into a new hut and left there until the witch is found and killed and until the relatives bring enough presents to fill the coffin. After all this is accomplished the late lamented is allowed to rest in peace.

"There is still another way of disposing of the dead. The body is cut into pieces and tied in wrappings made of palm leaves, and then hung up inside a hut and smoked, the smudge being kept going day and night. King Jim N'Gomah of Coango, who died in the spring of 1887, was not buried when we left in 1895. The relatives had not enough valuable presents to put into the coffin, so they delayed the funeral. This old king's son

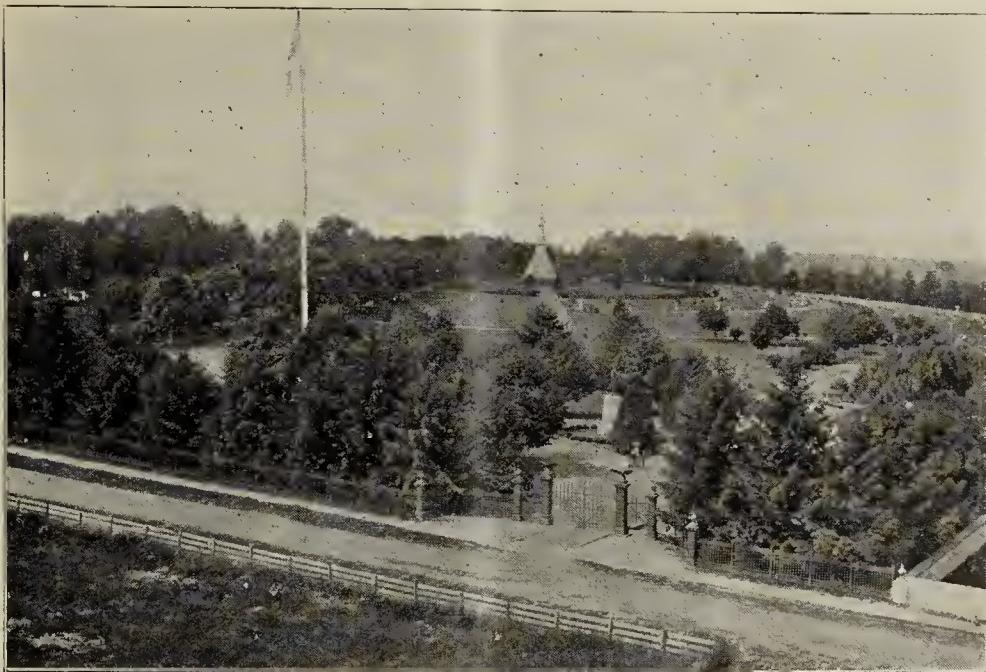
and daughter both died and were buried while his body was being smoked. Perhaps he is not buried yet.

"It is a strange fact that the natives never put rum into a coffin, even if they have a good deal of it in their possession. Funerals are very noisy affairs. Dancing, drinking and shooting are the order of the day. The shooting is done at sunrise and sunset to keep the spirit of the dead from returning. The natives believe in a spirit world. The dead have a town just like the living, and live in the same manner, marry and are given in marriage, buy and sell, make war with one another, in fact, carry on all the vocations of life in their world, which is invisible.

"The cloth and other things are placed in the coffin to give the rich a start in the spirit world. The natives say that there are ghosts, and for this reason they are great cowards after dark. It has often happened that the natives have robbed the graves of white people, to carry away parts of the body, in most cases the head, because they believe there is great merit in this, and that any chief who has a white man's head in his possession can withstand all foes. These things do not happen quite so often now, because there are more Europeans there and the graveyards are more carefully protected."

NATIONAL CEMETERY, GETTYSBURG.

The one who visits the famous battlefield of Gettysburg seems never to tire of the scene. The evidences of conflict which meet one on every hand, though it occurred thirty-four years ago, brings forth a desire to visit the field again and again, and so, early in June last, I found myself for the third time footing it over the field, fancying myself again one of the 80,000 men who struggled there on the Union side, as I was on those fateful July days in 1863. The field of battle occupied a line nearly 20 miles in length, and I took a day for each of the four principal points, viz., the battle ground of the first day near Willoughby Run; that of the second day, Cemetery Hill; the third day, the Bloody Angle, and the fourth the Round Tops and Culps Hill. The publisher of PARK AND CEMETERY had commissioned me to get him some views of what I thought would be of interest, which I have done. Among them is the National cemetery and its Soldiers monument, and these I have selected for the chief subject of my notes at this time, reserving other photographs for future use. The illustration of the cemetery is a somewhat old one, but I could not get a recent one showing the grounds as well as this. At the present day the evergreens that hide the superintendent's cottage at the entrance gate have been cut away, which is an improvement. Then, too, the wooden fence across the road—the Baltimore Pike—has given way to a pretty iron one, enclosing the batteries and monuments which are thickly dotted over East Cemetery Hill.



NATIONAL CEMETERY, GETTYSBURG, PA.

The trees which line the cemetery along the road are Norway spruce. They are now in fine condition, though planted, as we presume most all the large trees were, in 1864, when the grounds were designed by Mr. Wm. Saunders, now of the U. S. Department of Agriculture. All over the field of battle the batteries and monuments stand where the commands fought, save in the case of those like that of Gen. Reynolds, which is seen not far from the entrance gates. He has, however, another one where he fell, at Reynolds Grove. The artillery between the statue and the gate is that of the 5th New York. A road sweeps to the left near the statue, and is carried along the boundary of the grounds, sweeping around beyond the monument and returning on the boundary near the lower side. At its commencement, sugar maples line its sides, but to the left of the monument it is Norway maples. These have grown so nicely that the branches embower the road, but the lower limbs are cut away to give lots of air and to permit of an uninterrupted view on all sides. The boundary of the cemetery is not far from this driveway. The white monuments which are seen beyond, to the left, are headstones in the old cemetery, which adjoins the National, and which is separated only by an arbor-vitæ hedge, of some five feet in height. This is the cemetery of the battlefield. It was among the graves our men fought, and many are there to-day who remember how the splintered stones flew in all directions about them as the plunging shots from the Confederate guns opened on them preceding Pickett's charge.

The site of the present one was then farm land. It now occupies all the land between the old cemetery and the Taneytown road. I over-

looked asking the extent of it, but I should say it is four or five acres, not more. The arrangement of the graves seems to be a very good one. The monument is the base, and around, in semi-circles, are lines of graves. The inner lines contain the dead of states which had but few slain, while the outside lines being more lengthy are given to New York, Pennsylvania, Ohio and states which lost heavily. The spaces between the lines are about twelve feet apart. The lines are like broad curb stones, being about a foot wide, flat, and slightly sloping on the top. Just enough space is allowed each one to record his name, company and regiment, about two feet or less.

Looking at the picture, a foot path will be observed leading to the monument. On the left will be observed a lot of white dots. These are small white stones, every one of which is marked "unknown." Think of over eight hundred dead, whose relatives and friends were never sure of what became of them!

SOLDIERS' MONUMENT IN NATIONAL CEMETERY,
GETTYSBURG, PA.

On fame's eternal camping ground
Their silent tents are spread,
But glory guards with solemn round
The bivouac of the dead."

The hedge which partly encircles the monument is composed of globe arbor-vitæ inside, with a belt of shrubs on the outside.

The monument itself is such a fine work of art that a separate illustration of it is given. It stands upon the spot where Lincoln delivered his now famous "Address at Gettysburg." There are four life-size figures surrounding it, which are to represent War, Peace, History and Plenty. From the vicinity of this monument an excellent view can be had of Seminary Ridge and the valley over which the attacking troops advanced to the battle.

The trees and shrubs on the grounds are not among the newest of the day, as the planting was fairly completed at the formation.

Near the entrance gate is a nice group of Japanese maples, the largest about eight feet high. There are very nice Japanese cedars, two of them, *Retinopora obtusa*, being nearly fifty feet high, and well proportioned. And of other species, such as *squarrosa*, *filifera* and *aurea*, specimens of about eight feet were observed. Other trees and shrubs noticed were *Pavia flora* and *P. rubra*, *Salisburia*, topped at twelve feet, and making a spreading growth, blood beech, Nordman Fir, Sweet Gum and some *Pinus cembra* of good size. Globe arbor-vitæ were much used as single specimens, as well as some of the golden varieties.

The trees and shrubs and grounds in general showed that Mr. Hamilton, the superintendent, was master of the situation. I had not the pleasure of meeting him, but the people of Gettysburg I found speaking very highly of him. *Joseph Meehan.*

OLD KING SOLOMON.

A stone has recently been placed in the Lexington, Ky., cemetery to mark the grave of a unique local character made famous by the genius of James Lane Allen—"Old King Solomon."

This strange man is spoken of as having wandered about the streets of the town "a worthless fellow, unkempt, unwashed, lazy, smoking, drinking, and in rags." Yet he was a hero, and well deserved this often spoken of but long neglected tribute. For, when in 1833 Lexington was scourged by cholera, and every one who could get away from the stricken city fled, this man remained and voluntarily buried the rapidly accumulating dead. He seems to have been a singular combination of unselfish devotion and hopeless vagabondism.

Born in the same county of Virginia as Henry Clay it was his proudest boast that "him and Henry were boys together."

It seems fitting that his grave lies humbly near that of his life-time hero and friend, for he never swerved from his stanch devotion and it is said that "through all his degradation and poverty he could never be politically bought."

An anecdote related in this connection is as follows: "One afternoon near the close of a hotly contested election, when deep in his cups, Old King Solomon was speculatively approached by a democratic acquaintance and asked if he had voted. Giving an answer in the negative he was gently asked to take a drink and then go to the polls. On the way a five dollar bill was slipped into the hand of the intoxicated captive. They voted—Old Solomon the straight-out whig ticket. Walking away together the democrat remarked: "You did not vote as I expected you to." "No," replied King Solomon, "I pocketed the insult and voted for Henry Clay."

The old man was well-known to Mr. Bell, the superintendent of Lexington Cemetery, who has himself erected the stone to King Solomon's memory.

Mr. Bell speaks of him as being quaint and kindly and notwithstanding his eccentricities and shortcomings, honest and upright.

These words and this act but further justify Mr. Bell's friends in their fixed opinion regarding his high sense of justice and his manly kindness of heart.

Allen has immortalized the poor but noble hearted vagabond, and Mr. Bell has set up a stone that will remind all passers by that the honor of high deeds is a rich heritage that even the poor and humble may bequeath to posterity.

F. C. S.

The Chinese have a flower that is white at night or in the shade and red in the sunlight.

The "glorious uncertainty of law" sometimes produces good results. A few years ago, an owner of sidewalk trees in Chester County, Pa., brought an action against a telegraph company for trimming his trees to make room for telegraph wires. The court decided that damages should be paid to the amount of the value of the material cut away, at cordwood prices. Recently, a telegraph company cut away completely a number of trees which interfered with the wires, on the property of a gentleman at Douglasville, Pennsylvania. He brought suit, and the men who cut the trees were sentenced to pay a fine of fifty dollars each, or imprisonment for fifty days. This decision was appealed to the Supreme Court, on the ground that they were only liable for the actual cord-wood value of the trees. But the Supreme Court has confirmed the lower court's verdict. This is a case where the uncertainty of the law has been an advantage in reversing an original absurdity.—*Meehan's Monthly for June.*

MEMORIAL SCULPTURE.

The great need of to-day in our own memorial sculpture is variety of design and a greater breadth of true artistic originality, and it is to be expected that under the conditions of the new order of things in our cemetery management, in which it is desira-

tion from the monotony complained of. The illustration is of a monument modeled by Mathurin Moreau, to be erected in honor of Joigneaux, a celebrated French agriculturist. M. Moreau is of the younger school of French sculptors, and for this work he was awarded the medal of honor at this year's salon of the Champs Elysees, Paris.

Another illustration herewith given, shows a cemetery memorial by the celebrated French sculptor Antoine Mercie, who is famous for such work. It is in memory of Madame Carvalho a great singer. Mercie is noted for beautiful figure work, as several illustrations in these columns from time to time serve to show. Perhaps as far as character in the figure is concerned, the sculptor generally shows more in his work, but as Madame Carvalho created the role



MONUMENT TO JOIGNEAUX, MATHURIN MOREAU, SC.

ble that monuments should be fewer in number and of better design, more art will be exhibited in our memorials than heretofore. The same suggestion applies to the sculptural adornment of our cities and parks. There is on the whole too much sameness in the design of our portrait statuary, which however, is in a large measure due to the inartistic features of modern garments.

There is no necessity however to confine the memorial to a full length portrait model, but as the accompanying illustration shows, a beautiful memorial monument may be composed of a bust and ideal accessories. This form of memorial is gaining in favor and offers not only a pleasing but most artistic varia-



"TOMB OF MME. CARVALHO."—MERCIE, SC.

of Marguerite in Gounod's opera of Faust, Mercie may have had the last scene of the opera in his mind when he designed the memorial. The idea is a beautiful one. The monument is cut from one piece of marble, a method often adopted by sculptors of such work. This is suggestive as an appropriate cemetery memorial, entirely out of the monotony which does so much to mar the harmony of the mind as well as that of the surroundings in our beautiful cemetery grounds.

CARDEN PLANTS—THEIR GEOGRAPHY, XX.

ROSALES, (C.)

THE GENISTA, ROSA AND DROSERA ALLIANCE.

Continued.

Sempervivum "houseleeks" have about 50 species from Europe, Northern and Eastern Asia, North Africa and southwards in the mountains. None are Californian. Several have been and are used for edging and working out designs in flower beds, and for such purposes and for rock works they are well adapted. In company with species of the last genus pleasing masses of color may be worked out.

Drosera "sundews" in 100 species usually inhabit very different stations. They are scattered over the bogs and moist pastures of the world, only occasionally attaining to anything above the most humble proportions. They are reported carnivorous.

Drosophyllum Lusitanicum extends from South Western Europe to the Mauritius. It grows in sandy places to a foot or more high, has yellow flowers, and is a fly catcher.

Dionaea is the curious and somewhat anomalous "Venus fly-trap" found chiefly on the coast lands of North Carolina and more sparingly southwards. I had a good quantity of seed of this plant collected for Kew years ago, to be used in raising plants for the investigations of the late Chas. Darwin. The feeding to them of unnamed quantities of beefsteak did not appear to render them more robust, and it is a question whether their leaf-trap is of real use to them.

Roridula is a genus of South African fly-traps



RORIDULA DENTATA.
Flower natural size.



HAMAMELIS ARBOREA.

LOROPETALUM CHINENSIS.

in 2 species. They attain to the dignity of shrubby plants of from 3 to 6 feet high, and the branches are used to catch flies by the colonists.

Parottia belongs to another and dissimilar tribe. There are 2 species from Persia and Cashmere. The Persian is hardy and colors finely in autumn.

Fothergilla is a monotypic native shrub.

Corylopsis has 4 species from Japan, China and the Himalayas. One or two are in gardens.

Hamamelis "witch hazels" are in 3 species, and are Asiatic and North American. The native kind flowers in the late autumn southwards or early winter northwards. The Asiatics and their varieties are more disposed to flower in winter or early spring according to the climate in which they grow. They are interesting shrubs but seldom seen in gardens.

Loropetalum Chinensis is the only one of the genus and in close affinity.

The curious Rhodoleias, Disanthus, Bucklandias and Altingias are all found in Indian or Eastern Asiatic countries, and it is largely due to them, or some of them, that the following genus found its way to this alliance, all the way from the neighborhood of the plane trees.

Liquidamber is now credited with 2 species, the well known handsome "sweet gum" and the species from Asia minor. It is remarkable that as fine a tree as the sweet gum is not used as a street tree in preference to the soft maples and poplars. It is far more bonnie.

The tribe *Bruniæ* contains a number of handsome evergreen shrubs and small trees from South Africa in the genus Berzelia, Brunia, Berardia, Stavia and Linconia, only useful outdoors in such favored climates as California.

The *Haloragæ* are mostly aquatic or marsh herbs, differing widely in aspect however, until it seems as though the tribe were a *refugium* for the botanists—yet no doubt they resemble each other in permanent characters of flowers and fruit, and it is to be hoped they will cease to be shifted about

from pillar to post in the books, to the confusion of botanists themselves, and the utter discouragement of everyone else. *Proserpinaca* is the "mermaid reed," *Hippuris* is the "mares tail."

Gunnera has 11 species from South America, New Zealand, Australia Java, and other Pacific islands. Some of them have immense saxifragous leaves, and different indeed to other plants of the tribe. *G. Chilensis* in particular is proportioned in size to

the *Tiarella* as the *Victoria* is to the Himalayan *Nymphaea pygmæa* (*tetragona*.) Darwin measured a plant growing wild on sandstone cliffs at Chiloe, "with leaves nearly eight feet in diameter." To give an idea of the plant, mount the *Tiarella* on a short rough often reclinate caudex; reduce the flower spike to a length shorter than the leaf-stalk, consolidate and make it dense with innumerable little reddish flowers and enlarge the leaves to the size of those of the *Victoria*. Some of our florists are in hopes they can grow

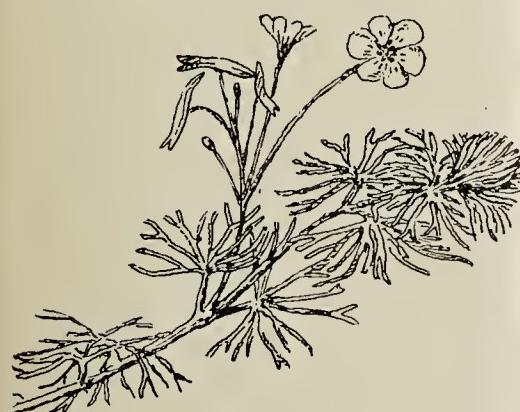
this species in western New York, but it is easy to be too optimistic with reference to Pacific coast plants either northern or southern. However, the plant is hardy in southern England—with protection.

G. Magellanica if its name signifies should be still hardier, and no doubt several species will prove hardy on the Pacific coast.

Myriophyllum is the "water milfoil" genus, *Callitricha* is the "water starwort." Some of these are very pretty in glass aquariums, etc., but over running still water are apt to be nuisances. *James MacPherson.*



LIQUIDAMBER STYRACIFLUA.



MYRIOPHYLLUM HETEROPHYLLUM.

THE TWO FOUNDERS OF MODERN GARDENING, II.

The transformation of the garden art from the architectural to the natural style did not, of course, take place in a day. Switzer, a practitioner in the formal style, first felt it, and among his tedious designs, attempted to unite his garden with the landscape without. Walls and fences were to be removed, and woods and even corn-fields made to appear a part of the garden scene. Batty Langly, another practitioner, in 1728 belabored the "regular stiff and stuck-up manner in which many gardens yet appear," and yet is proverbial for designing the very same features which caused it. Bacon with all his devotion to formal gardening had no love for the grotesque. "As for the making of knots and figures with divers-colored earths," he says in his essay, *Of Gardens*, "They be but toys; you may see as good sights many times in tarts." In the center of his ideal garden he imagined a heath, or desert, as he called it, which he wished to be framed as much as may be to a natural wildness." The real beginnings came through pictorial and literary art. First, certain landscape paintings of the Italian School, from the brush of Salvator Rosa, Titian and Claude, displayed the beauties of forest scenery. More important were the writings of the greater men in the realm of literature. Tasso and Milton have been considered as the heralds of this artistic movement. In the *Garden of Armida* of one, and in *Paradise* of the other are some of the most delightful combinations of natural beauty. Horace Walpole even refers the first ideas of modern gardening to Milton. One might think so from some of his descriptions of Eden, as where he speaks of the crisped brooks which fed

"Flowers worthy of Paradise which not nice art
In beds and curious knots, but nature boon
Poured forth profuse on hill and dale and plain."

Milton certainly had caught the feeling of nature but that he foresaw modern gardening is somewhat fanciful, for the ancients, too, had a love for natural beauty, as is seen in Cicero's description of his villa at Arpinum, and in that of Tacitus of the wild gardens of Nero.

The real literary originators of modern gardening in Europe are Addison and Pope, since they not only admired and described picturesque scenery, but they imitated it. Addison, in 1712, brings forward in the *Spectator* the delights of nature in wild scenes, and with his refined taste enjoys their contemplation. He says, "There is something more bold and masterly in the rough, careless strokes of nature than in the nice touches and embellishments of art. We always find the poet in love with a country life, where nature appears in the greatest perfection, and furnishes out all those

scenes that are most apt to delight the imagination." Again he says, "Our English gardens are not so entertaining to the fancy as those in France and Italy," (referring to some examples of natural gardening already attempted in those countries,) "where we see a large extent of ground covered over with an agreeable mixture of garden and forest, which represent everywhere an artificial rudeness, much more charming than that neatness and elegance which we meet with in those of our own country. Why may not a whole estate be thrown into a garden by frequent plantations that may turn as much to the profit as the pleasure of the owner?" Pope with his caustic tongue heaps his sarcasm upon the gardens of his period. This is a portion of his description of a garden:

"His gardens next your admiration call,
On every side you look, behold the wall!
No pleasing intricacies intervene,
No artful wildness to perplex the scene;
Grove nods at grove, each alley has a brother,
And half the platform just reflects the other.
The suffering eye inverted nature sees,
Trees cut to statues, statues thick as trees,
With here a fountain never to be played,
And there a summer house that knows no shade."

Pope, at the same time, in a poem addressed to the Earl of Burlington, lays down the fundamental principles of the art of which here is a part:

"To build, to plant, whatever you intend,
For rear the column, or the arch to bend,
To swell the terrace, or to sink the grot,
In all let nature never be forgot.
Consult the genius of the place in all,
That tells the waters, or to rise or fall;
Calls in the country, catches opening glades,
Joins willing woods, and varies shades from shades,
Now, breaks, or now directs, the intending lines,
Paints as you plant, and as you work, designs."

This was written in 1732, although he had already written an essay in 1713 immediately following Addison's in which he ridicules the practice of cutting shrubs into monstrous forms. Thomson, too, in his "Seasons" had already just preceded him with his rural dreams. The rules, however, were not original with Pope but learned from Bridgeman, although the credit of the preception belongs with him. Bridgeman was a designer of the transition who had learned from Loudon and Wise of Queen Anne's time. Wise had made winding walks in one of his gardens to the admiration of Addison, had covered a parterre with turf, and had introduced other innovations. Bridgeman went farther and banished verdant sculpture and symmetry, although he still adhered to straight walks and high clipt hedges. Later, he introduced cultivated fields, and even a little forest appearance, but never went far from old traditions. This is what remained to the genius of Kent and Brown, as Mason, the poet, says,

"Bacon was the prophet, Milton the herald; and Addison, Pope and Kent the champions of true taste."

While to Kent and Brown belong the honor of being the first practitioners in Landscape Gardening, this art cannot be said not to have existed previous to their work. Loudon says: "Without doubt examples of wild scenery with walks have existed from the earliest ages. In fact, it is impossible to doubt that beautiful scenery was admired by minds of refinement in all times and places, and that the wealthy would frequently endeavor to create it. Semiram imitated nature two thousand years before Nero, and Nero nearly as long a period before Pope and Shenstone." The French contend that the first landscape gardener was theirs in the person of Dufresny." In fact, a great change occurred in French taste through the extremes of Le Notre's followers which made his garden as unpopular as it had been popular before. LeNotre's successor in office, Dufresny, differed from him decidedly in taste. He designed several gardens in imitation of nature, but his example was not followed but only admired at the time. It was not until 1753 that the natural garden found a place in France. It is to Dufresny's gardens in France and Italy that Addison may refer in his essay quoted above. The first artists who practiced in the modern style were Kent and Brown. It was for Kent to carry Pope's ideas into execution, "to realize the descriptions of the poets," as Walpole says, "for which he was peculiarly adapted by being a painter. He was painter enough to taste the charms of landscape, bold and opinionative enough to dare and to dictate, and born with a genius to strike out a greater system." It was for Brown to carry on this movement, sparing many of the beauties of the old style, and carrying on all with much taste. The straight lines, the stiff terraces, and formal avenues of the ancient style were followed by the flowing lines, the large smooth lawns and the irregularity of the new. We cannot say but that the Kent school of modern gardening went to extremes, as it was characterized by the complete absence of lines, terraces, or architectural forms adjoining the house, making the house rise abruptly from the lawn, while the general surface was characterized by smoothness and barrenness. Later, a revulsion against this extreme took place, and this school of landscape gardening gave rise to another distinguished by roughness and intricacy, called the Picturesque School. This, in turn, was followed by a third, the Gardenesque, which sought to display the beauty of single trees and shrubs, and, finally, the landscape gardening of to-day.

As to the real work of Kent, we have Walpole's gushing description. He tells that his great principles were perspective, and light and shade. That he broke too extensive or too uniform a lawn with groups of trees. That he emphasized favorable objects and veiled deformities by plantations, and where animated objects were wanted in his landscape, he resorted to his architectural genius. That he taught the streams to meander as they would with smooth borders and waving irregularity. That he gave freedom to forms of trees and allowed their branches to wave unrestricted. Kent's ideas, he says, were rarely great, or his landscapes majestic. His clumps were puny and he did not plant for maturity. But this was in some measure owing to the novelty of his art. He followed nature to extremes and even planted dead trees, but was soon laughed out of the excess. As he proceeded his work improved. Other writers speak of him but not always in the same eulogistic terms. It was he who destroyed walls for boundaries and harmonized the lawn with the park. His practice, too, was to go directly to the forest to study sylvan scenery in its natural state, which led him to believe that beauty was produced exclusively through sublimity. Accordingly, he used forest trees and excluded shrubs much to the discomfort of the pleasure-ground, and with a wrong conception of natural beauty, as Scott says of him, "His style is not simplicity, but affectation laboring to seem simple." Last, while he was good in design, he was faulty in his horticulture. As one looks at his work carefully, the conclusion comes that he had enough of an artist's instincts to appreciate natural beauty and its perception by poets and painters, and that the same boldness which allowed him to design everything that fashion brought him, enabled him to seize the happy moment of taste for the natural to put these principles into practice as he had done everything else. Landscape Gardening, as it left his hands seems crude, even artificial, as it must have been with a man of his makeup and at the very beginning of a new era in gardening.

Of Brown, much less is said, in fact, much less is to be said. His work has been highly extolled and as much decried. He had not so great taste for picturesque beauty as Kent had and was, besides, self-taught. His works were all on the same plan. "Whatever was the extent or character of the surface of his gardens," Loudon says, "they were all surrounded by a narrow belt of trees, and the space within distinguished by round or oval clumps, with a reach or two of a tame river, generally on different levels." He had a faculty for shaping surfaces, and exhibited it on all occasions without due regard to nature. His declivities were all softened to

gentle slopes, while single trees and clumps spotted the plantation. His practice of clumping trees was notorious as is shown by a story told of him after he had become sheriff. He was escorting the judges of assize, as was his duty, with a troop of javelin-men who were in disorder. This was too much for a certain wit who accosted him with, "Brown, clump your javelin men." His management of water, on the other hand, is said not to be excelled. He himself was accustomed to boast that "the Thames would never forgive him for what he had done at Blenheim." He must have been a man of considerable genius as is shown by the number of his clients. Indeed, he undertook so much that he had not time to work out anything original. Brown had a large number of followers, without much ability, who soon overdid and corrupted the style, to be replaced by the new school of landscape gardening, the picturesque. Brown's real work came in continuing the style as laid down by Kent, and giving satisfaction to a true permanent taste. While speaking of the real founders of modern gardening, we must not forget Shenstone, a minor poet, who suggested the term "landskip" or landscape to be applied to modern gardening.

The style spread over all Europe. Many beautiful old gardens were destroyed in France to make place for the new, and English and French gardeners were in demand throughout the continent. From a superficial view of the matter, comparing Kent's gardening with that of to-day, it would seem that so far Landscape Gardening was not wholly a success. It does not seem yet to be wholly consistent with itself, as the old formal garden was in its intentions. It was, however, only a beginning. It did satisfy that craving for nature which comes from a higher civilization, and it was the fore-runner of good things to come. Landscape Gardening yet has everything before it.

The causes of this transformation in the garden art are not to be neglected. After men began to live in homes constructed by art, they gathered about them the herbs and fruit whose use they had learned. Fences came, and as dwellings became more luxurious, walls supplied the place of hedges, while within spurred on by a love of variety, grew up the regularity and grotesqueness of the formal garden. When invention was exhausted, nothing remained but to demolish the walls, and let in the beauties of the surrounding country. The love of nature is a part of the human mind; and it only needed the removal of the garden's barriers to develop it. The fashion of the formal garden had been confined mainly to the gardens of the court who set the taste of the nation. "As men became educated," says Loudon, "and began to think for themselves,

this influence gradually gave way, and the native feeling and reason predominated." Literature began to show that cultivated men had a keen appreciation of natural scenery, and a disposition to speak slightly of the beauty of gardens as compared with that of nature. At the same time, the system of formal gardening had now become so completely matured that it was reduced to rules of practice, with the necessary consequence of an imminent break-up. A real change in taste had taken place, a reversion to naturalness in everything. Then it only required the genius and boldness of Kent to develop these new-found thoughts, and the industry of Brown to put them into practice. It was for them to raze the walls, treat the garden as a natural scene, and make the beginning of the modern garden which we admire to-day.

A. Phelps Wyman.

Cornell University, Ithaca, N. Y.

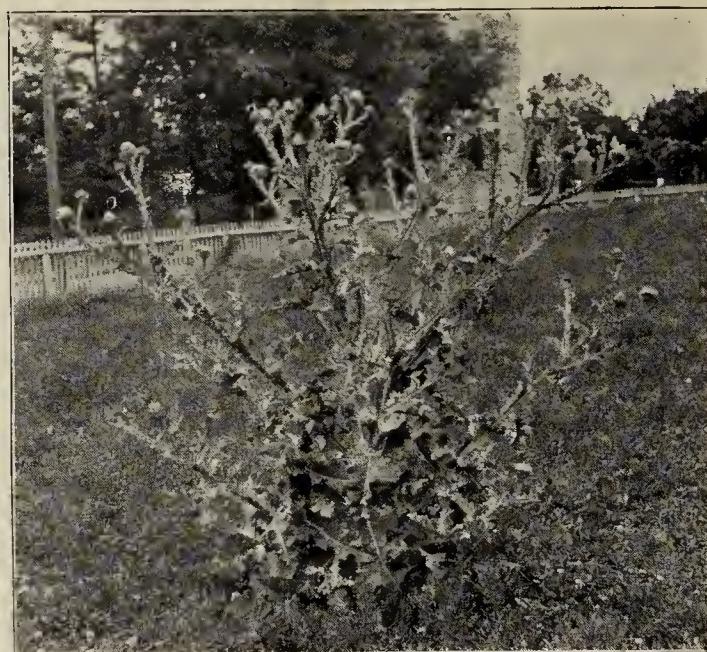
THE SCOTCH THISTLE.

The accompanying engravings clearly show the decorative possibilities of the Scotch Thistle, *Onopordum acanthum*, when well placed and of thrifty growth, and in a lesser degree its adaptability for use in indoor decorations.

The cut of the finely developed growing specimen may remind some reader of Prof. Bailey's readable and helpful bulletin entitled "Suggestions for the Planting of Shrubbery," which includes an account and illustration of what he terms a "choice little woodland" as well as certain ironical remarks concerning horticultural likes and dislikes.



THE SCOTCH THISTLE IN DECORATION.



THE SCOTCH THISTLE.

The plant shown stands near the entrance to the Lexington, Ky., Cemetery on a broad strip of sward intervening between the roadway and the fence. The genial Scotch superintendent, Mr. C. S. Bell, says that the thistle has been growing in this situation nearly forty years having been started from seed from the grave of Burns, and that when he visited the poet's grave two years ago he found the thistle still growing there but less vigorously than in Kentucky.

It is possible that the Scottish emblem would prove a desirable plant for use in the wilder parts of many American Parks. It does not spread rapidly because the seeds are too heavy to be scattered by wind and are only disseminated by birds.

It is one of the cotton thistles, the leaves being clothed on the underside with a white pubescence, and it grows to a height of from four to six feet, making a specimen that is both stately and picturesque.

My correspondent is kind enough to say that if any of my "park friends" would like to try the plant he can collect some of the seed if notified at once. I suggest that any one wishing to take advantage of his kind offer would better send their request, accompanied by a stamped return envelope, directly to Mr. C. S. Bell, Cemetery Office, West Main St., Lexington, Ky.

Growing Scotch Thistles in pots for indoor decoration is, perhaps, unusual but it proved a marked success in this case, for they were splendid plants and singularly appropriate in connection

with the celebration of the Lexington Caledonian society in honor of Queen Victoria's diamond Jubilee.

The Scottish national emblem seems to be well chosen, for in it may be traced a family resemblance to some of the national characteristics.

There is, for instance, the brave bearing, rigid uprightness, wonderful vigor and independence, picturesqueness, a certain scratchy exterior that resents unwarranted or inconsiderate intrusion and withal, the proverbial kindness of heart is not inaptly represented by the tender downy undersurface of its leaves.

Fanny Copley Seavey.

CEMETERY TOPICS.

Perpetual Care.

As important as any matter connected with cemetery development and management is that provision, nowadays very prominent in the consideration of cemetery officials, which looks to the future care and permanent establishment of the cemetery. This provision is termed "Perpetual Care," and is intended, as the name implies, to secure for all time the permanent existence of the cemetery, under the best possible conditions of preservation as to physical appearance and legal stability. The principal agency in the consummation of such an important object, is, of course, a fund of sufficient magnitude to afford an income large enough to meet all the requirements that our present knowledge deems desirable; for the legal means to command at this time are ample to cover all future contingencies affecting permanency. To attain the goal of an adequate fund is the work of to-day, and in regard to the older cemeteries, in which the question has only recently been raised and in which the major part of the properties are owned and operated under old rules and regulations, the race is a hard one. This does not lie so much in the direction of influencing individual lot owners, for a little serious missionary work among them is apt to be convincing, but the difficult feature of the undertaking is to reach such lot owners as are non-resident, or who have inherited the lots, or who have lost immediate interest, with sufficient force as to induce the guarantee of a subscription or bequest to meet the conditions imposed.

Human affection or sympathy decreases in a very rapid ratio as relationship widens, and respect which may act as a substitute in human nature is not so keenly prone to make sacrifices for such a purpose as the preservation of a cemetery lot. But, nevertheless, the natural desire to keep the family grave and its surroundings comely and restful is a powerful motive on generations immediately affected, whether resident or non-resident, and it is upon this sentiment that active work must be brought to bear,

as the mainspring of securing the fund, so far as reliance on available lot owners is trustworthy.

The next thought as to how most effectively to impress the question is met by the conclusion that the cemetery officials are in a position to know most concerning the individuality of their lot owners, and from that standpoint must act. Unremitting educational effort must be the watchword, and every new argument forthcoming must be vigorously presented. As a general proposition there should be no better promoter of the perpetual care idea than the clergyman, and it is a matter of constant and growing surprise that the clergy have not been more active in cemetery work. It is simply astonishing that the clergy as a whole have not made effective protest against the degrading condition of the average rural cemetery. It is not too late to invoke the aid of the minister, and his aid should be the most effective of all, all things considered.

The arguments in favor of the perpetual care of the cemetery are so conclusive, because so in harmony with the sentiment controlling the higher aspirations of humanity that to deny them is to degrade that humanity and to place oneself on a lower plane in the scale of human progress. To feel assured that the graves of departed kindred, tied to us by varying degrees of affection, shall be maintained in a high degree of care, without imposing upon us any active attention, and that we ourselves shall finally rest under like conditions, imparts a sense of comfort unattainable in any other direction; and to know, further, that this care will be unremittingly administered for all that have gone and for all actually interested to the limit of the capacity of the lot and for all time, affords a satisfaction and relief for those "doubts and fears" which with the unsatisfied longings of the human heart, make life oftentimes but a weary waiting. The subject, however, has a far wider significance than the mere fact of keeping the cemetery in order for all time for its own lot-owners, which when realized, as it surely will be as the beauties of the question develop in the mind, will render the perfecting of the scheme more easily attainable as time progresses. It is gratifying to note the progress being made all over the country and as the whole question becomes appreciated and understood a very rapid advance will surely result.

* * *

Superfluous Stone Work in Cemeteries.

The enforcement of the law in lawn plan cemeteries against the placing of curbing or lot inclosures of any kind, has done much to bring about a public appreciation of the beauties of properly conducted cemetery grounds. Time was when a lot

coping or fencing was regarded as essential to the furnishing of a cemetery lot as the family monument itself, and the introduction of a law against such inclosures was regarded as arbitrary if not positively unjust. Its force however, has long since been demonstrated by results equally gratifying to lot owners and cemetery officials.

The objections to coping are plainly apparent when we see how the frost throws it out of line, separates the stones, and renders repairs constantly necessary to keep it sightly, which repairs are seldom carried out. Further, the cost of mowing is much increased, to say nothing of the difficulty of doing such work properly; and more than that, coping has proved itself of no practical value in cemetery work. All new lawn plan cemeteries positively prohibit lot enclosures of any kind, prescribe that corner posts shall be set level with the sward, and allow only a head marker to each grave, limited to one foot in height in some instances and to nearly the level of the ground in others.

Such rules are in harmony with the beautiful lawn plan idea which carried out to its proper limit will in connection with perpetual care make the cemeteries of to-day worthy of the care of future generations rather than a reproach that must be remedied in the interests of the community by their extinction.

An appreciation of the tendency of the times should lead all cemetery officials, where the rules do not prohibit coping and tall stones, to adopt the lawn plan in all new sections. To encourage the removal of all useless and unsightly enclosures, many cemeteries undertake the expense of removing them from the lots without cost to the owners, for the purpose of securing an improvement of their grounds, and the annual reports of many of the Eastern cemeteries make mention of the number of enclosures annually taken out.

For many years custom demanded both head and foot stones, and of variable heights according to individual taste, now a head stone is only permitted, in most cases not over one foot above the ground. The same with corner posts, which not long ago were several feet in height, are now set level with the ground, inconspicuous, neither interfering with the work of the lawn mower, nor marring the landscape. Steps at entrances of lots are now generally prohibited or are restricted by rigid rules. The work of remodelling our cemeteries is going rapidly forward, and when removals are made the tall 2 in. slab headstones, when reset find themselves either cut down in halves, or buried to a sufficient depth in the ground.

Let the good work go on until our grave yards become veritable burial parks, worthy of

the perpetual care so righteously advocated.

* * *

The following extracts from the rules regulating the stone work in a large eastern cemetery are suggestive:

All monuments, headstones and other devices, to designate the names and burial places of the dead, must be approved by the Cemetery Management before a permit will be issued for their erection in the cemetery.

No monument shall be placed on a lot containing less than 162 square feet.

To prevent the excessive and unsightly crowding of tombstones, not more than one monument, gravestone, or mark that exceeds five inches in height above the surface of the ground, shall be permitted in any entire lot or plot. This rule applies also for the two and the three-grave sections.

But one mark shall be placed at any grave.

No gravestone or mark can be set in a socket or with a dowel, it must be of one solid stone. Granite is recommended as the best and most durable material for grave marks and monuments.

Double head or footstones embracing two or more graves will not be permitted.

No advertisements in any form will be allowed on any stone work in the cemetery.

Before contracting for improvements on your lot, consult the Cemetery Management as to the feasibility of the intended improvement on the same.

* * *

Cave Hill Cemetery, Louisville, Ky., now limits the height of markers in the new ground to not exceeding ten inches.

* * *

Much attention has been given to the subject of forms of bequest of funds for the future care of lots, and the following is that adopted by the Kensico Cemetery, New York City:

I give and bequeath to THE KENSICO CEMETERY the sum of..... dollars (*or other property, real or personal—describing it,*) upon trust, however, to apply the income arising therefrom, under the direction of the Directors, to the repair, preservation or renewal of any tomb, monument or other structure, and the planting and cultivating of trees, shrubs, flowers and plants in or around lot number.....in Section.....in the cemetery grounds of the said Corporation; and to apply the surplus thereof, if any, to the improvement and embellishment of the said grounds.

* * *

Suggestions to Lot Owners.

Always remember to touch nothing on the cemetery that does not belong to you.

If your Cemetery Association does not provide for the perpetual care of your lot it is your duty to do so.

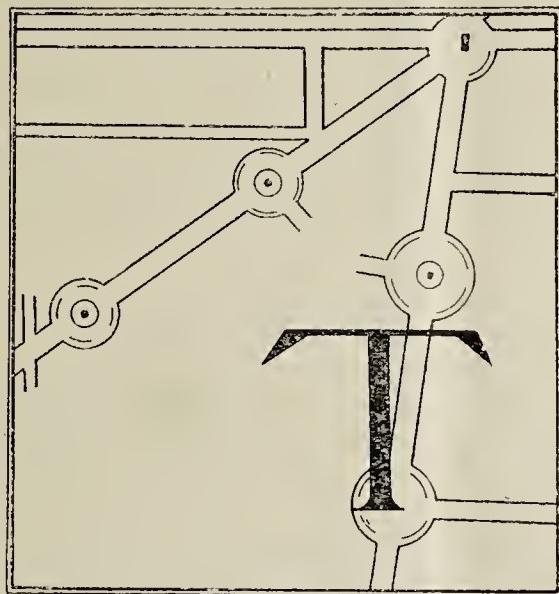
Better to have no monument on a lot than to

have an inartistic one, or one that closely resembles those on adjoining lots.

Many monuments would be greatly improved if they were partially hidden by an English ivy or an Ampelopsis.

The lower the headstones and the grave mounds the better the general effect. Foot stones are unnecessary and are generally prohibited.

Hardy flowering shrubs if carefully selected and properly planted are preferable to beds of short lived annuals.



PLAN OF PASEO.—Sketched by author.

the additional name of Calle de Patoni, and at its westernly end stands the bronze equestrian statue of Carlos IV. which was once erected in the Plaza Mayor, and afterwards hidden in the patio of the University. The inscription upon its pedestal states somewhat emphatically that it is preserved only as a work of art.

Humboldt was enthusiastic in his favorable

PLAZA
ALAMEDA
AND PASEO
IN THE
CITY OF
MEXICO.

I.

THE second
block west
of the Alamedas
in the Aven-
ida Juarez
receives

the addition-

criticisms of this statue, and the history of its design and execution presents many interesting incidents. But our present interest in it lies in the fact that it has been made the initial point of two Paseos.

The dilapidated and abandoned Paseo di Bucarelli, named after its projector, one of the most beneficent of the Mexican Viceroys, runs southerly to the Garita de Belen. It was laid out upon an attractive plan, with two glorietas, the one midway of its length, having had a fountain with a statue of Victory, in commemoration of Gen. Vicente Guerrero, a Revolutionary hero, as a part of its design. But statue and fountain have participated in the general ruin.

The other Paseo now bears the name of Reform. It was laid out during the Maximilian regime and was by him intended to be named the Paseo de la Imperadora. From the Carlos IV. statue it runs southwesterly to the gates of Chapultepec; which are none other than the four handsome iron gates which opened to the glorietta in the Plaza Mayor, and afterwards adorned the Alameda. The Paseo is a broad avenue and contains six glorietas, each four hundred feet in diameter, surrounded by stone seats.

The intention is to place monuments relating to the history of Mexico, in these glorietas. The Carlos IV. statue has no place in this projected series. The first glorietta contains the Columbus monument—a group of statues. In the second is the Guantemocztzin monument. The third and fourth will probably be devoted to Hidalgo and Juarez. And we may be greatly surprised if Porfirio Diaz be not commemorated in one of the others. The Mexican fondness for flowering plants is gratified in these glorietas.



PASEO DE LA VIGA AND BUST OF GUANTEMOCZTIN.



PASEO DE LA REFORMA, LOOKING TOWARDS CHAPULTEPEC.

At present the festivities which seek the Paseo de la Reforma centre upon the Glorieta de Columbus, and in that neighborhood the band stand has been erected. Stone seats are disposed along the paseo at intervals.

There is a double row of trees—eucalyptus and cypress—on each side of the Paseo, its entire length. The trees are of great height, and between them is presented a beautiful vista, closed by the wooded heights of Chapultepec and their picturesque crown—the castle itself. In the other direction the view includes the mountains, that shut in the valley of Mexico, with the two snow clad peaks, Popocatepetl and Iztaccihuatl, towering above them. These are the features which enable visitors in the city of Mexico to declare that the Paseo de la Reforma is unrivaled in beauty by any suburban drive in America or Europe.

There is still another suburban Paseo related to the city of Mexico. It follows the west bank of

Viga canal south-east of the city. There is about midway of its course, a basin with a bust of Guantemoczin upon a pedestal near it. Otherwise there has been no attempt made to adorn it. The recreation of the city fashionables is diverted from the Paseo de la Reforma, to this Paseo de la Viga, during the Lenten season.

Formerly the Calzada (causeway) from the capital to Guadalupe was of the nature of a religious paseo. It was built towards the end of the seventeenth century and was adorned by a glorieta in the centre and by fifteen handsome'ly sculptured monuments along its course. These monuments celebrated the mysteries of the Rosary and were for the delectation of pious pilgrims to the shrine of Guadalupe. But the railroad to Vera Cruz appropriated the Calzada for a road bed and its glories quickly departed or are to be seen now only in their ruins.

A. H. N.

THE IDEAL PARK SUPERINTENDENT.*

It may seem presumptuous for one who has never been a park superintendent to attempt to give the qualifications needed for such a position. Undoubtedly practical experience would add to one's ability to speak with authority on this subject, but I may claim such ability as comes from being engaged in a similar calling—from having great admiration for parks, from visiting many such institutions and from studying what has been written on landscape gardening, as well as the actual landscape effects.

When Mr. Egan asked me to prepare this paper he inclosed a slip on which was written, "What are the qualifications for an ideal park superintendent?" As the ideal combination can probably never be found in one man, which qualities can best be spared? Which are of the greatest importance? What is the relative importance of the various essentials, such as engineering, tree planting, administrative ability, etc.?

A park superintendent should first of all be honest, reliable, conscientious, gentlemanly—in short, be a man of good character. The people's money which he spends should secure the best results for the people. If it goes for material it should be for the best quality and the greatest quantity that the amount expended will command; if for labor the work done should correspond with the wages paid. But all this is so generally admitted and is true of so many other callings that no time need be spent in its demonstration. Next to good character comes a knowledge of what a park should be. A superintendent should know for what purpose the thing he superintends exists, what should be its leading features and how these can be preserved or attained. He should know a park exists primarily for its beauty, for its varied scenery, for its contrast with city streets and for the rest, the recreation and the pleasure that is given by this beauty with all its various modes of expression. In



GLORIETA DE COLUMBUS.

*A paper read before the Chicago Horticultural Society, by O. C. Simonds, Landscape Gardener.

some cases the superintendent is also the designer, and then he should know that the general plan of the park is of more importance than any single feature. If a building is to be erected it should not be placed where it will cut off an important view; if a tree is to be planted it should stand where it will improve the landscape rather than where it will compete with other trees; if a road is to be made the superintendent should know, first, where to place it, and then how to construct it. If he cannot have both kinds of knowledge he should have the first and get some one else to build the road, since there are a dozen who can answer the question "how?" to one that can answer the question "where?" If there is grading to do he should undertake it with the feeling of an artist rather than an engineer since the shaping of park surfaces is more nearly allied to sculpture than to the building of railroads. If people give a monument, a fountain or a relic of any kind and it must be accepted he should know how to subordinate it to the general effect desired.

But in most cases the superintendent will be required to carry out the design furnished by some one else. Even then it is important that he should know something of the principles of design, and should have a knowledge of trees, shrubs and flowers with their various requirements; he should appreciate the value of large open spaces and varied outlines; he should know what constitutes a good road—when it has good lines and proper construction; he should know how to make the border of a lake appear natural and interesting. To put the whole matter briefly, a park superintendent, in order to fulfill his duties in a satisfactory manner, should have some knowledge of landscape gardening. This is just as important as it is for a man who conducts an orchestra to have some knowledge of music. The conductor may not be able to compose an opera, but he should be able to appreciate a good composition, and putting a man in charge of work required to maintain and create beautiful scenery who has no special knowledge of landscape art would be like asking a man who cannot beat time or tell one tune from another to act as leader for an orchestra.

It is, to be sure, an advantage for a park superintendent to have some knowledge of engineering. He should know how to put in drains, water pipes, build roads, walks and do all the various kinds of engineering work usually needed in the construction of a park. He should also know how to prepare the various plats and records of such work that may be needed for reference. I believe that this knowledge can be gained by the person who has also the desired acquaintance with landscape gardening, but if the superintendent is to be deficient in either line the deficiency can be most easily supplied from other sources if it is lack of knowledge of engineering.

The ideal park superintendent should be thoroughly in love with his work. I have known a number of such men. One had charge of a very large tract of land, which was really a public park, although it was not called such and was not managed by a City Council or by Park Commissioners. I remember visiting him many years ago;

he would call my attention to bits of scenery, the border of a lake, an undulating lawn, a distant group of red pines, by reflecting them in a mirror which he carried for the purpose and which framed in and separated the view in question or the picture being examined. He showed these views with as much pleasure as a mother would exhibit in showing her baby. Again, on going to see him early one morning I found him greatly interested in a ravine drive. He had actually been laying an important drain with his own hands. On another occasion at his office he took great pleasure in showing his various books, which treated of landscape gardening and birds. I know another superintendent, who is still living, who for many years was in the employ of the late Henry Shaw of St. Louis, and who still looks after Tower Grove Park, who shows as much interest and affection for his lawns, trees, shrubs and lilies as a parent would show for a child, but this deep interest, which is so essential for producing the best results, cannot be expected from a man whose position is insecure; from a man who may be discharged when the other party gets in power. The ideal superintendent should expect to spend his life with the park he cares for. The park is to continue for generations. Many of the effects desired will require years of growth for their production. It takes time for a man to become acquainted with the various features of even a small park, so the one in charge should have no fear whatever of being replaced by another man; his whole thought should be given to the park, and, moreover, since he is responsible in a large measure for the manner in which the park is conducted, he should have absolute control of all the employes in the park, the laborers, gardeners, policemen, etc. He is called upon to make estimates of what certain work will cost, and then is required to execute the work. It is unfair to him to require him to use men hired and controlled by some one else. In the selection of employes he will satisfy himself in regard to an applicant's ability to do a needed work, but will not inquire as to his nationality, his religion or his politics. The fact that the man is a Buddhist, Presbyterian or Agnostic would probably not interfere with his doing a good day's work at mowing grass. The superintendent should have authority to discharge at once any man who showed no interest in his work; who worked rapidly when some one was looking at him, but rested the most of the time when he thought himself alone; who talked too much with his fellow-employes or attempted in any way to make them discontented. The ideal superintendent would in time become acquainted with all the workers in the park and take some interest in them aside from securing the greatest amount of work for money expended. A word of explanation now and then, calling the attention of a mere laborer to the beauty of a tree or shrub; the statement of an interesting fact in natural history; or possibly a bit of political economy, would give the workman food for thought and help to deprive his labor of a little of its drudgery. On the other hand, the superintendent can often help to educate the park commissioners, or if fortunately one of the commissioners should be a man

of good taste the superintendent should show a readiness to learn and profit by any advice that may be given.

But, although the ideal park superintendent will have an intimate knowledge of the design of the park and be brought in close relations with the park commissioners and with his fellow-workers, his greatest influence will come from his relation to the public. The park exists for the residents of a city and their guests. It is a place where people go to get fresh air, to see an expanse of sky and clouds and lawn and meadow, to see foliage and flowers, to get sweet perfume and to hear the music of birds. It may be conducted in such a manner as to exert an elevating influence on all who go to see it, to teach them to respect others rights, to show them what is in good taste and to give them the purest kind of enjoyment. In the domain of landscape art it should take a leading position, keeping up with the best thought of the times. Its treatment should be simple and natural, and not accompanied with grotesque features which deprave people's taste. The man in charge of a public park has an opportunity to exert an influence which should place him on a level with the leading ministers, doctors and other professional men of the present times.

O. C. Simonds.

MICHIGAN'S EARLY WILD FLOWERS, II.

CALTHA PALUSTRIS, *Golden-cup*, *Marsh Marigold*, Very wrongly called *Cowslip*, the cowslip being a primrose. We Americans don't appreciate this flower as much as we should. No other plant in this class can surpass it in conspicuous brilliancy. No one can see the large areas in our wet forests clothed with a dense mass of brilliant yellow flowers, somewhat relieved by round, rich green leaves without great admiration. Flowers in large clusters, each 1 to 1½ inches wide, often double in its native swamps, hence promising a rich reward to some florist who might seek to improve it. It is a large plant 1¼ feet high, often 2 or 3 feet, with large foliage and it has a very large fibrous root. Grows in rich soils very wet in autumn, spring and winter, becoming very dry in summer, after the plant entirely dies above ground.

CARDAMINE PURPUREA, *Purple Bitter Cress*. *Purple Cardamine*. Bears resemblance to a rose-colored or purplish candy-tuft (*Iberis* species), one of our earliest and prettiest wild flowers, fine for cut flowers, parks or flower gardens. April. Entirely dies down in May. Plant hairy, 6 to 18 inches high.

CARDAMINE RHOMBOIDEA, *Spring cress*. Botanists have confounded the preceding with this, but they are very distinct. This species is much larger, very smooth, with flowers almost pure white, one month later than *C. purpurea*. Does not grow in moist woods as does the preceding, but is found usually along the sunny borders of streams. Pretty but less so than the preceding.

CARDAMINE PRATENSIS. *Cuckoo-flower*. The handsomest of the genus. Very smooth, 10 to 16 inches high, with pinnate leaves and racemes of pure white flowers early in May. Grows in moister swamps than the others, in deep shades, or in moss upon ponds. The Eng-

lish have a handsome double variety. This would be a good bog plant.

CLAYTONIA VIRGINICA, *Spring Beauty*. Our most abundant early tuberous flower, many stems arising from a tuber, each bearing a pair of leaves and a raceme of pink, purple veined flowers early in April. 6 to 8 inches high. Decays very early. One of the few wild flowers which sheep actually benefit. In our forests this plant in early spring furnishes the carpet into which are woven many patterns composed of other early wild flowers.

DENTARIA DIPHYLLA, *Two-leaved Pepper-root*. Another handsome early candy-tuft like flower, one foot or so high rising from a long thickish rhizome. Leaves very handsome, dark purple, bronze or dark green, composed of 3 large very smooth leaflets. Flowers pure white, late in April or early May. Fine for cut flowers. Good for forcing, parks, etc.

DENTARIA LACINIATA, *Cut-leaved Pepper-root*. 1 foot. Leaves light green, finely divided, flowers fragrant in clusters, white, purplish outside. Root, clusters of long yellow tubers. April and May. Very pretty. Decays early.

ERIGENIA BULBOSEA, *Pepper-and-salt*. Very dainty flower of early spring, 3 to 6 inches high, with finely divided leaves, and clusters small white flowers with purple stamens. Interesting and pretty but would not recommend the planting of it in very large quantities. Shady low woods, particularly river valleys in alluvial soil.

ERYTHRONIUM ALBIDUM, *White Erythronium*. This genus contains very pretty early spring flowering bulbs, natives of both hemispheres. This plant is the rarest and prettiest of our Michigan species. Grows 8 to 10 inches high from a bulb deep in the ground, bearing a pair of pale-green spotted lanceolate leaves and single pure white or rose tinted lily-shaped flower at its summit in early May. Both foliage and flowers very handsome.

ERYTHRONIUM AMERICANUM, *Yellow Erythronium*. Leaves darker green with brown spots, and a rather large nodding brilliant yellow flower, the sepals and petals much revolute in the bright sunshine, like a miniature superb lily in form, closing at night and but little open in cloudy or wet weather. Very handsome indeed. Both species densely clothe the ground with pretty foliage where they grow, and both are ornamental, adapted for cut flowers, forcing, parks, bulb-gardens, etc. For several years at least they have the habit of forming a new bulb each year, each succeeding bulb being 1 to 3 inches deeper in the ground, the flowering bulbs being 5 to 8 inches deep in the ground usually among the roots and very difficult to dig. Those who wish to plant them in large quantities would gain much by getting smaller bulbs, say 1 to 3 years old and plant them. They flower when 3 years old. Flowers in May and decays before June 10th.

HYPoxIS ERECTA, *Star-grass*. Very pretty, leaves grass like, flowers in clusters, rich yellow almost or quite ¾ of an inch wide, in late May and early June. Is found in marshy swamps and dry sandy highlands,

evidently preferring limy soils. Grows 5 to 8 inches high. Certainly this plant would appear very pretty planted very closely together, exclusively alone.

ANEMONELLA THALICTROIDES, *Rue anemone*. I place this with the next species because they much resemble each other although very distinct. *Anemonella thalictroides* grows about 1 foot high, 1 or more stems from a fibro tuberous root, with leaves resembling the Columbine (*aquilegia*) and leafy umbels of 5 to 10 purplish flowers, or pure white, some of them 1 inch wide. Grows on dryer soils than the next usually in shady places, often on hill sides, and the larger flowers appear from May 15th to June 1st fully 10 days later than the next. Very pretty when in masses.

ISOPYRUM BITERNATUM, *False Rue Anemone*. In every way much more delicate than the preceding though much like it. Flowers in April and early May pure white, solitary, borne on the branches of the stem, smaller than those of *anemonella thalictroides*. This handsome wild flower literally covers some of our forests, with *Claytonias*, *Dicentras*, etc., presenting a very beautiful appearance. As pretty as is *anemonella thalictroides* we think this is much prettier. Root fibro-tuberous like the last. As this foliage and flowers are both handsome it is recommended for extensive planting. Rich moist woods.

PODOPHYLLUM PELTATUM, *American Mandrake*. Another improper name, as the true Mandrake is *Atropa Mandragora* of Asia, a nightshade, a member of not only a different genus and different order but also of a different class of flowering plants, another proof of the general unreliability of "common English" names. This flower is rapidly becoming very popular, particularly as a cut flower, and is certainly a very interesting plant. Were it not so abundant here in Michigan we would esteem it far more than we do, even as it is, no wild flower is preferred to this for making bouquets, wreaths, or for all uses of a first-class florists' flower. The young plants send up a solitary leaf, 1 foot or more wide, exactly peltate (shield-shaped) the stem attached exactly in the centre of the 7 to 9 lobed beautifully symmetrical leaf. The flowering stems arise 1 or 2 feet bearing 2 irregularly peltate deeply lobed leaves and a single large (1½ inches wide) pure white vase-like flower, to some extremely fragrant, to others of a most disagreeable odor, strikingly illustrating the fact that tastes differ. The flowers are of great use to the florist, and will yet be greatly prized by them for cut flowers. These are followed by oblong fragrant fruits 1½ to 3 inches long 1 inch thick, when ripe to some very pleasant and agreeable, to others extremely disgusting causing severe illness if eaten—a sort of cholera morbus like sickness. As the plants grow, the leaves hide the flowers so they do not appear conspicuous, but certainly growing as it does in our forests this plant contributes vastly toward beautifying our natural landscape. The stems arise abruptly from long creeping thick rhizomes, much used as a medicine. The flowers appear from May 15th to June 10th, and the fruit ripens the last of July or first of August. The stem entirely decays above ground the latter part of August and very soon not a vestige of the

plant appears above ground. But it is so abundant that the roots are easily found. Shades, high or low soil, generally a sandy loam.

RANUNCULUS FASCICULARIS, *Early Buttercup*. This handsome little flower decorates our steep high, dry clay or sand hills from April 15 to May 15, its brilliant handsome flowers, often semi-double, occasionally full double when seen growing wild, thus promising to become fully double in cultivation. Grows 3 to 8 inches high with hairy divided leaves most of which with the stems arise from a fibro-tuberous root. Grows just where many plants fail to grow on steep dry sunny hills, also on level dry sandy lands. Dies down about June 1st, but this plant as well as *Isopyrum binternatum* has the habit of sending up leaves to the surface in October. Worthy of extensive planting.

SANGUINARIA CANADENSIS, *Blood root*. This is one of our most beautiful wild flowers, and with such as *Biccularis*, *Dicentras*, *Erythroniums* and *Trilliums*, we would recommend to every flower lover, as all will give excellent satisfaction in cultivation. Of course they also rank as among the best for parks and cemeteries, yet some of these herein described are better for the park than for the flower garden. *Sanguinaria Canadensis* has large thick rhizomes containing abundant blood-like juice, from which arise beautiful, round, several lobed, glaucous (sea green) leaves, and pure white wax-like flowers 1 to 1½ inches square, the only flower I know that is of a square outline, usually very many flowers opening at once. Late in April and early May, decaying in June or July. Grows usually in shades, level or hillsides in rich sandy loam, in places that become very dry in summer. Soil, rich sandy loam or leaf-mold. Though not very lasting, good for cut flowers. Worthy extensive planting.

TRIENTALIS AMERICANA, *Star flower*. A beautiful little plant 6 inches to 1 foot, bearing a whorl of 6 to 8 lanceolate bright green leaves and several pure white flowers like 7-pointed stars. Late in May. Grows in moss or rich moist soils. Not recommended for general planting or for a plant making much show, but nevertheless it is a dainty little flower that many like and appreciate. Find massed in some cool moist shady nook. Decays in August. Root a small tuber.

TRILLIUM CERUNNUS, *Nodding Trillium*. This species does not make the conspicuous show that *Trillium grandiflorum* does, but is a dainty modest little gem. Grows about 1 foot high with drooping pure white flowers with pink stamens, followed by a large berry like red capsule, very handsome indeed. Flowers later in April and early May. Decays in June. Just the plant for some quiet or retired nook. Moiset, rich shades.

TRILLIUM ERECTUM, *Beth Flower*. A large and beautiful *Trillium*, 1 or 2 feet high with 3 large broad leaves and a large dusky flower, very strong smelling, filled by large red fleshy fruit. The color of the flower is a very uncommon one, and it is well worthy of a place in any kind of ornamental gardening. Grows in rich shady swamps. Flowers in early May, and plants die down in July. Has several varieties. Variety pen-

duliflorum has flowers on large peduncles which bend down and hang below the leaves. Variety album has white flowers. Have never met in south-east Michigan; or any form having flowers of any but the usual dusky, purple shade.

TRILLIUM GRANDIFLORUM, *Great Flowered Trillium*. This is the grandest of all our Trilliums, the most beautiful and popular species, valuable for garden, park, forcing or cut flowers. Very variable. The common form has flowers $2\frac{1}{2}$ to $3\frac{1}{2}$ inches wide ranging from pure white to pink or rose, the color not varying because of the age of the flower as some botanists have supposed, but often being pink or rose from the bud. Rich sandy fields, hills and woods.

SWAMP FORM. This has the largest tubers and plants of any form, the flowers ranging from $3\frac{1}{2}$ to $4\frac{1}{2}$ inches, almost universally pure white; grows in rich shady swamps, Tamarack or arbor vitæ. *Highland variety*. Grows on wooded hills in dry soils; flowers about size of last, but often pink. *Variety Maximum*. The grandest type of Trillium, rare. Flowers $3\frac{1}{2}$ to 6 inches, wide, white, rose or beautifully variegated. The tubers smaller than in most forms. *Trillium grandiflorum* flowers from May 10 to June 1st, has white fruit and decays above ground in July and August, and by September cannot be found. Like other plants of this class it should not be planted out until after the flowering season, when the tubers have matured, say in June or July. A small number may be shipped a short distance and successfully transplanted in April but a large number at distance would fail.

The object of this article is to call to proper attention one of the most beautiful classes of our native ornamentals, and remove such obstacles as may hinder their successful culture. He who attempts to plant them before blooming in early spring, be he park or cemetery superintendent, gardener, florist or park lover, cannot meet with any great degree of success, as a rule meeting but vexation, trouble and loss. A few can be successfully planted in May, others in June, while July and August are the proper months for planting others. Unless one obtained a supply before the stems decayed it is useless to think of planting any after the stems decay which may be in any month from May to August, according to kind, for so completely do they disappear that no one would suspect that a few days or weeks before they had clothed the ground with beauty. He who would succeed with them must give up all preconceived ideas about planting them in early spring or autumn, or that "if shipped in hot weather they will die on the journey," etc. Of course it would be foolish to transplant or ship shrubbery and ordinary herbaceous perennials in the summer, just as foolish as to plant early flowering bulbous and tuberous flowers in early spring or autumn. The fact is law governs everything. If we would succeed with any class of plants or with any plant, we must cast aside all our preconceived notions and confront the laws which govern each particular case.

With very few exceptions they are best planted in masses, each kind by itself or much better by some

shrub, or herbaceous perennial that reaches its glory when these early bloomers no longer appear above the soil, or they may be mixed with low perennials that retain their foliage all summer.

THE OLE BULL MONUMENT, LORING PARK, MINNEAPOLIS, MINN.

The statue of Ole Bull, of which an illustration is given herewith, is erected on a conspicuous site in Loring Park, Minneapolis, Minn., to which city it was presented by the Norwegian Americans of the Northwest. The figure was modelled by the late Jacob Fjelde, the Norwegian sculptor of Minneapolis, who died soon after the completion of the work, and indeed the model was completed under sad circumstances. The figure is cast in bronze and is nine feet high, mounted on a pedestal of Barre granite, the base of which is six feet square.

On the back of the die, is the inscription in raised letters: "Erected by Norwegian Americans," and another inscription is cut on the front. Total cost of statue and pedestal was \$8,000.

It was unveiled May 17th last and formally presented to the city of Minneapolis by the Ole Bull Monument Association.

Another effort to stimulate the energy and enterprise of the French people is being made by the Colonial Union, who propose to create in Paris or the suburbs a colonial garden for the purpose of experimenting with plants which can be suitably acclimated in the newly acquired French colonies. To some extent this has been attempted before. All the vanilla beans that come from the East Indies, for instance, are the product of trees whose ancestor stands to-day in one of the greenhouses of the Jardin des Plantes. The Colonial Union has also begun the publication of the periodical giving all possible information in regard to the agricultural possibilities of the colonies.



* PARK NOTES. *

Texas will make a park of the San Jacinto battle ground.

* * *

Plans have been completed for a mid-way park between Waterloo and Cedar Falls, Iowa.

* * *

The citizens of Tappan, N. Y., propose to create a park on the spot where the old court house stood at the time of the Revolution.

* * *

Herkimer, N. Y., voted in the affirmative on the appropriation of \$2,500 to convert the old cemetery at the west end of Liberty street into a public park. The work will be carried out without delay.

* * *

In memory of her father, the late Judge Mark Skinner, of Chicago, Mrs. Henry J. Willing, of that city, has built a library building at Manchester, Vt., and has filled it with 10,000 volumes. It will soon be formally presented to the town. Mark Skinner is buried at Manchester.

* * *

The attention of park superintendents is called to the illustration in this issue showing a specimen plant of the Scotch Thistle. It is suggested that as this thistle is not at all troublesome about spreading it might be used in the wilder parts of parks. Certainly it is a distinct and handsome plant and might be used, with good effect, in such locations.

* * *

An excellent floral combination not heretofore noted is this year seen in Tower Grove Park, St. Louis. It consists of a carpet of Phlox subulata through which clumps of pansies rise at irregular intervals in orderly disorder. The result is charming in coloring and in general effect, and Mr. Gurney's idea is herewith made public for the common good of our readers.

* * *

The project to establish a public park in Cambridge, Mass., on land adjoining the Lowell homestead, in memory of James Russell Lowell, should be a matter of speedy consummation. The sum required is \$35,000. With the addition of the old home and grounds which may eventually be added, it will form a memorial, beneficial to the people and more substantial in its memorial aspect than any monument.

* * *

At the last meeting of the North Dakota Educational Association held a few weeks ago, a committee was appointed to prepare a catalogue of the plants of North Dakota. The attempt is the first in the history of North Dakota to secure a comprehensive knowledge of the flora of the state. The members of the committee are prominent educators, well versed in botany, and will devote the greater part of the summer to their work.

* * *

So much discussion and criticism have attended the selection of sites for the small parks of New York City, which were provided for in the Small Park act, that it was deemed prudent to select an advisory committee of representative citizens to take charge of the work. This committee was appointed by Mayor Strong last month, with ex-mayor G. S. Hewitt as chairman. New York City is permitted to expend \$100,000 per year for breathing places for the people.

* * *

Delaware, O., has an ordinance in force calling for the trimming of shade and ornamental trees growing upon, over or into any street, avenue or sidewalk of that town, to a height of

twelve feet from the ground. The work is to be done under direction of Mr. David Grinton, Supt. of Oak Grove Cemetery, and any failure to comply with the law within ten days of receiving notice from the authorities, the work will be carried out by the superintendent and the property charged with the cost and collected the same as taxes. This should assure the work being done properly and the trees intelligently handled.

* * *

A number of improvements are contemplated and in progress by the Fairmount Park Commission of Philadelphia, especially in roads and drives and the planting and seeding of bare unsightly spots. The spraying machine has been hard at work on the trees to their great benefit. Plans and specifications have been prepared for an attractive and convenient ladies' public comfort building, proposed to be constructed at some convenient place in the East Park, possibly near the Diamond street entrance. The Richard Smith bequest, for the great arch and also the childrens playground and building, is now claiming close attention.

* * *

The report of the National Sculpture Society to the Park Commissioners of New York City, recommends that the question of a site for the St. Gauden's equestrian statue of the late Gen. William T. Sherman be kept open until the sculptor had devoted further attention to the details of the work. The park commissioners denied the application of Gen. Daniel Butterfield to place a monument, in memory of the officers and privates of the Twelfth Regiment who died on Southern battlefields, upon Mount Tom, in Riverside Park, "because the design of the monument itself is lacking in monumental character, and better adapted to a flat plateau than to a rocky eminence." Both the monument and site were approved in the matter of the memorial to the late Richard Morris Hunt, and the question was referred to the Municipal Art Commission.

* * *

The National Sculpture Society of New York has announced that "through the generosity of Mr. T. Kelly of New York it will offer a prize for the best and second best designs for a sun dial, to be competed for under its direction, the designs to be exhibited in the society's exhibition in 1898, and the award to be made at that time. The prizes are \$500 for the best design and \$250 for the second best, the competition to be open to sculptors only. The sun dial is to be placed out of doors on a lawn, free from buildings or other objects, and no restrictions are made as to cost, the prizes being for the models alone. The designs shall be submitted in plaster models, uncolored, executed to a scale of three inches to the foot. The competition will be judged by a committee to be appointed by the council of the society for that purpose after the end of February, 1898."

* * *

In a communication to the president of Quincy, Ill., Boulevard and Park Association, speaking of a beautiful park site, Mr. O. C. Simonds, Chicago, says: "We might say, with justice, that it would be unpardonable for the city of Quincy to lose the tract of land from the cemetery along the bluff, south, to include the Indian mounds, through failure to improve the present chance of getting it. Such neglect on the part of your city would be equivalent to Chicago's neglect to take advantage of its frontage on Lake Michigan. The citizens of Quincy will be proud of Indian park if they secure it and develop it in such a way as to enable people to easily view the splendid landscape which stretches away from the southeast over Illinois around by the Mississippi river and Missouri to the northwest. The parks which you already have, including Washington square and the Primrose tract, should of course be cared for so as to get the most from the special characteristics of each. If you have not money to develop Indian park along with the other parks which you now have, by all means secure the title to the land."

PARK AND CEMETERY.

CEMETERY NOTES.

The receptacles for dead children in Spain are coffins of pink, blue, or gray tint, which are carried open to the grave.

* * *

South Bend, Ind., is grappling with the all important question of a new city cemetery. A new cemetery is an absolute necessity it is declared by its leading journal and the city must either purchase a site or a private corporation must be formed for the purpose.

* * *

The suburb of Hendon, north of London, England, has a tavern in a churchyard, with tombstones all around it, which has been kept there for many hundred years, and is the only licensed house in such a place. The original building was burned down 200 years ago, the present house having been built soon after the restoration of Charles II.

* * *

Some enterprising manufacturers have been putting on the market rattan coffins, which, however, do not seem to have attracted much more than passing attention due to the novelty of the thing. The material is interwoven on the basket idea and finished around the top in an appropriate pattern, arrangement being made to slide the lid into place to secure it. It is finished in white enamel, and a copper lining forms a receptacle for the body.

* * *

The annual report of Woodmere cemetery, Woodmere, Mich., gives the following figures: Total receipts \$37,905.86, which includes: sales of lot \$14,894.70, labor on lots, etc., \$16,283.86, sundries, 804.45. Total expenditure, \$28,408.64, which includes improvements \$3575.; labor, \$13,857.74; expense account \$7438.33. Number of interments 1,609. An analysis of the labor record shows that there were expended on improvements 2,860 days; care of the grounds 2,790 days; digging graves and care of same 1,957 days, and on miscellaneous work 979.

* * *

There is now a cemetery law in New York state which while exempting cemetery lots from confiscation and sale, provides for the collection of the assessments levied under this law in precisely the same manner as school taxes are collected. Hillside Cemetery, Middletown, N. Y., recently came under the law and an assessment of \$2 a lot was levied on its lot-owners. Assessments can be levied only when needed for the proper maintenance of cemeteries and in no case can they be imposed oftener than once in twelve months. A full and complete account of expenditures is required from all cemetery authorities levying assessments for maintenance.

* * *

Many items occur in the exchanges relative to the organization of local committees having in view the improvement of the cemetery. Among them are: Kyle River, Ill.; Oakland cemetery, Centerville, Ia., where the Ladies' Cemetery Association organized a flower carnival for raising funds; Whiting, Me., where an organization has been formed to raise funds and report upon enlargement and improvement; in May and June in Clark Co., Ind., a series of festivals are held for raising funds and otherwise providing for the care of the rural cemeteries; residents of Bennington Centre, Vt., are at work raising funds to renovate the old cemetery, which contains the remains and tombs of so many of Vermont's celebrated people.

* * *

The annual meeting of the Allegheny cemetery, Allegheny, Pa., was held June 25th. The report shows that the financial

depression was also felt here. There were sold 44 lots at a total of \$19,294.25 and the number of lot-owners is now 5,181. The estimated cost of the 290 memorials erected during the year is \$65,000, much less than for many previous years; these included 10 monument, 55 tombs and 225 head markers. There were 896 interments made giving a total in the cemetery of 39,574, of which 10,500 are in single graves. The total receipts for the year were \$55,764 and disbursements \$38,290. The total invested capital from which the cemetery gets interest, except cash balance in bank is \$493,566 from which must be deducted the lot-holders endowment fund amounting to \$36,010. The cemetery suffered very severely from the unprecedented wind and rain storms through the year.

* * *

The method of disposing of the dead by dessication is proposed to be tried on a large scale by a mausoleum company in New York City. The project comprises the erection of a building near High Bridge, with a capacity of 10,000 bodies, to be 270 feet long, 75 feet deep and three stories high. The interior will be divided into sections with main corridors and diverging halls. The partitions between the niches containing the bodies will be of concrete without seam or joint, 4 inches thick. The niches will be a little larger than an ordinary coffin. The opening in these will be by two doors, the inner one of plate glass to be hermetically sealed after it is occupied, the outer one will be of bronze or other ornate material having the requisite inscriptions and other data. Dessication is carried out by means of a circulation of air made chemically pure by passing oversulphuric acid, and afterwards by heat. The process continues for three months.

* * *

Considerable of the history of Cleveland, O., is associated with the old Erie street cemetery, which was donated to the city in 1826, and which must in a few years be redeemed for other uses. The plot is 375 feet wide in Erie street, runs back 1163 feet to Brownell street and extends north from Erie court to Summer street. Although opened in 1826, a large number of removals from other cemeteries were made, and as the city only possesses records of the cemetery back to 1840, it would seem a proper suggestion that the Historical Society gather up all the data which the fast decaying tombs and gravestones offer to fill in the history of the city. It is estimated that some 22,000 bodies have been buried since 1826; there are 4,000 brick graves, and 14 private vaults. The oldest stone is one in memory of Rebekah Carter, who died in 1803. While many of the most prominent pioneers of Cleveland are buried here, the monuments and stones are very variable in kind, and the elements have played the usual havoc with the older ones constructed in the earlier years.

* * *

The report of George H. Gilbert, architect, on the condition of the Allyn Memorial Chapel, in Spring Grove Cemetery, Hartford, Conn., recently transferred to the cemetery association, recommends that all the joints in the dome and the upper part of the structure be raked out two inches and made solid with cement mortar or liquid grout, the side walls to be treated with elastic cement. The joints and other work should be cleaned with acid to remove the efflorescence which now disfigures the building. The turrets at the corners to be reset and made true, the ground at the base of the structure to be raised and to have a slope to prevent water from percolating into the foundations. He also recommends the filling of the crypts, which have never been used, with sand and that the floor be relaid with tile. The efflorescence on the inside, which has ruined the fine decorative work should be cleaned off and the broken terra cotta replaced. Perhaps faulty construction, but certainly neglect is answerable for this condition. It points a moral in regard to the care that should be bestowed on cemetery structures.

Kokomo, Ind., is stirred up over a proposed ordinance providing Rules and Regulations to govern Crown Point cemetery, which has been conducted for many years under the superintendency of Mr. John W. Cooper, without any definite regulations to guide him or control lot-holders. Mr. Cooper, in drawing up the new rules and regulations, is endeavoring to incorporate therein the latest prevailing practice, and this appears to be too radical for the local sentiment. It is to be hoped that the discussion will open the eyes of the people to the best interests of the grounds, and result in holding up the superintendent's hands in his endeavor to create a beautiful cemetery.

An officer of the Museum of Natural History in New York City has compiled a list of the birds which he saw on the hats of women on two recent afternoons. The list includes forty species including thrushes, warblers, shrikes, flycatchers, tanagers, swallows, waxwings, grosbeaks, sparrows, orioles, woodpeckers, jays, owls, grouse, doves, quails, shore birds, herons, gulls, terns, and grebes. In all there were 173 wild birds, or parts of them, on hats. Of these at least thirty two varieties are protected, or are supposed to be protected, by law during all or a major portion of the year. A New York exchange says: "A Boston court recently decided it unlawful to wear feathers of a bird protected by law, and a similar law exists in New York, but as long as it is fashionable to wear feathers it is presumable women will tolerate the cruelty which secures this headgear. There is no hope for the birds except by a rigorous enforcement of law." Park authorities can help discourage this cruel craze, by making the care of the birds a feature of park work, and embodying in their reports data concerning their birds, their habits and characteristics.

CORRESPONDENCE.

Mr. C. D. Phipps, Supt. Franklin Cemetery, Franklin Pa., would like to know if other superintendents have much trouble in teaching their workmen how to do their work; can they be induced to read or study any papers relating to the work in the cemetery? In his 13 years' experience he has never had any one that would try to be useful and prepare himself to fill the superintendent's place should he be removed. He says: "They have access to my library and I have done all that is possible but they never seem to have time to read or study. Has anyone had any experience with crimson clover, and has it been a success and under what circumstances?"

Cemetery Methods at the Grave.

The articles that have appeared in recent times in PARK AND CEMETERY regarding "Reform at Funerals," have brought forth several communications describing details of consigning the caskets to the grave as adopted by the several writers, and generally the use of planking to retain the earth and prevent caving of the ground is common. Mr. G. W. Reily, secretary and superintendent of Grove Hill Cemetery, Shelbyville, Ky., also adopted a device whereby by the use of hay the harrowing sound of the earth falling on the coffin is prevented, a good idea. The following procedure as conducted in the most prominent of Chicago's cemeteries will be interesting. The grave is carefully dug as usual and the earth thrown out in a pile on one side. The whole thing is then covered with evergreen boughs, including the grave, around which the boughs are carefully disposed the butts being laid outward, but hole is entirely covered by the inter-woven tops of the boughs which meet in the centre. Sometimes the first row of boughs around the grave itself is held down by planks laid upon them and around the edge of the excavation. These planks are covered with more boughs completely concealing them. As the casket ap-

proach the edge of the grave the pall bearers are relieved by the sexton's assistants, who place two inconspicuous bearers across the grave upon which they deposit the coffin. This is now exactly in place to lower at proper moment. When this time comes the assistants raise the coffin, another man withdraws the bearers, and at the given word it sinks gently and without obstruction through the elastic covering of boughs, which as it descends, after passing through them, regain their position and present once more the same appearance as before the solemn ceremony was begun. Through the whole undertaking not a sight of the earth is given.

A well kept sod goes a long way towards preventing caving in, but where such is unavoidable means of retaining the soil must be adopted, but the above method can't be used anywhere where boughs can be obtained, for it is not necessary that they should be evergreen, but they should be fresh of course.

What Shall We Do with Our Dead?

The fashion of extravagance in burying the dead has become so universal and tyrannical that but few people, especially in our large cities can afford to die.

And what are we going to do about it? We are going to talk and write and by our example break the tyrants chains if possible; so that people may be free to die or free to live, just as they and their Divine author can agree.

First, there is the undertaker's bills which are simply enormous. Why?

The dead must be dressed out in their best for it is the last chance that they will have to make a show on earth.

The mortuary suit often costs from 20 to 30 dollars; then one must order a casket and box costing from 50 to 100 dollars; a gorgeous hearse and richly caparisoned horses, costing 5 to 10 dollars; hacks costing from 25 to 40 dollars; flowers from 10 to 30 dollars; the grave and trimmings cost from 5 to 15 dollars. Then comes the dress mourning of the family costing from 15 to 100 dollars; and finally a card must be put in the paper thanking the neighbors and friends for doing their duty, costing from 1 to 2 dollars more. Total cost from 100 to 300 dollars to dispose of a single lady. Is it right to thus ape the rich? Or is it right for the rich to set such an unworthy example?

As to the undertaker his business is sometimes a disagreeable though imperative work and he ought to be well paid. Some of them do get rich by taking advantage of the hour.

You have lost a relative or friend. In affliction's hour you do not want to go and banter for a sharp bargain, so you simply accept the price without comment.

But why should all this pomp, parade and show over an inanimate body be endured for a single day or an hour; to be buried so soon from sight forever in the earth?

Then there is the cemetery lot which many foolishly neglect to select until wanted for immediate use, and then in their haste select a lot that they do not like when in calmer hours they view it.

Then they want to exchange, making much expense in removing bodies, besides bothering the superintendent and marring the records. As superintendent I have known several such cases.

Now comes the final bills—the headstone or monument, which though often neglected for years and sometimes forever though more important than all the rest. When they are bought it is with cooler judgment; but fashion still reigns and so from 100 to 500 dollars must go for that. And finally the last bill "Perpetual Care" asks for from 100 to 500 dollars more.

These too last bills are the most sensible in the whole catalogue, simply because of their lasting worth. In all coming time they tell to generations yet unborn that you once lived, and when—and had respect enough for the dead to keep their graves and their memories green. And more the genealogist and the de-

PARK AND CEMETERY.

scendant turn to these records with heartfelt pleasure and certainty.

But the question at the head of this article is yet unanswered. Shall we embalm our dead for people 3000 years hence to unroll and ship away 2000 miles to fertilize their land? Or like the dead Pharaohs to be toted over the world and exhibited to the then rabble of earth? To me it is repugnant, and does not save any expense to the living. I had much rather rot beneath my own native soil.

Or shall we incinerate our dead and throw their ashes to the winds of heaven, or entomb them in a glass jar upon our parlor mantle shelf; or even bury them in the earth? Does this save any expense or give any pleasure to the living except that it is proof against the ghoul, the dissecting knife, and from being buried alive?

I now answer the question. These bodies are mortal and must die—then why not lay them away to mingle with mother earth from whence they sprung? This is nature dust to dust. Earth disinfects from disease and pollution, and sends back no unhealthy poison for the living. And some will ask how to save this vast expense of disposing of the dead in a civilized land?

Rich or poor I would for myself or dearest friend have a plain casket made of pine or whitewood varnished or stained, with plain iron handles and an uncostly plate—lined with white lasting or cheap satin.

The body should be dressed in plain natural clothes with a flower or two for their suggestiveness. One horse only, and a plain neat hearse should be employed. No useless casket box should be used at the grave.

I am very fond of flowers; yet I would not have a flower bought to bury with me. If some dear friend should lay a few flowers from their own garden above my head I would not object; but it looks like sacrilege to see as I have seen several times the past year, 200 dollars worth of flowers spread over a single grave. As to mourning dress—I would not change a rag of my clothes from my Sunday suit for any friend that I love; nor would I have them change anything for me.

Then I would have them sing over my grave no mournful dirge, but a song of joy and triumph like:

My rest is in heaven, my rest is not here,

or

Joyfully, joyfully onward I move.

And lastly I would have my minister speak of me as one gone beyond his watch and care. I should feel ashamed to have him praise me or recount my good deeds while living—much more being dead. I would have him tell my faults and warn others to avoid the scrapes that I got into, and leave me in the hands of my final Judge.

P.

ASSOCIATION OF AMERICAN CEMETERY SUPERINTENDENTS.

G. W. CREEZY, "Harmony Grove," Salem, Mass., President.
ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., Vice-President.
F. EURICH, "Woodlawn," Toledo, O., Secretary and Treasurer.

The Eleventh Annual Convention will be held at Cincinnati, O., Sept. 14, 15, 16 and 17.

SALEM, MASS., July 16th, 1897.

To Officials of Cemeteries.

GENTLEMEN: The time is fast approaching for our Annual Convention of the Association of American Cemetery Superintendents, to be held at Cincinnati, Ohio, September 14, 15, 16 and 17th.

The meeting will be one of unusual interest and profit.

We meet where we organized in 1887 with twenty members representing ten states.

By our last report we have one hundred and fifty members and these represent nearly every state, showing something of growth in numbers.

Superintendents who have had the privilege of attending any or all of the meetings realize, that they are much better able to cope with the difficulties which must come, therefore they are more useful and valuable as public servants.

Spring Grove Cemetery, Cincinnati, has more than three hundred acres of ready land and is one of the finest and best kept cemeteries in the country, and the information gained by a visit to the grounds alone would more than repay the expense of sending your representative.

Trusting you will see the importance of this and hoping to see your superintendent or representative,

I remain yours with respect,

George W. Creesy, Pres.

The Executive Committee has issued an address to cemetery officials, setting forth the object of the association and the importance to every cemetery of having its superintendent or some other official in attendance, at its annual conventions.

* * *

The programme for the convention is almost completed and will appear in these columns in August.

PUBLISHERS' DEPARTMENT.

Park Commissioners and Cemetery Trustees are requested to send us copies of their reports.

Photographs and descriptive sketches of interesting features in parks and cemeteries are solicited from our readers.

Mr. Bellet Lawson has removed to Chicago to assume the duties of laying out Mount Auburn Cemetery, a new burial ground, in the western part of the city. Mr. Lawson has been appointed Superintendent.

James Monahan, Sexton of City Cemetery, Independence, Mo., 100 years old March 20 last, died at his home in Independence June 24 of cancer. He was born in County Galway, Ireland, in 1797, and came to the United States in 1848, landing at New Orleans, but soon moved up the river to Independence, where he married. About this time in 1849, Mr. Monahan was appointed sexton of the city cemetery at Independence and he held the position at the time of his death. In the last city administration an effort was made to supersede him, but a majority of the council refused to confirm any other appointment. His wife died several years ago, but a large family of sons and daughters survive him.

OBITUARY.

Abram Bull, for 33 years in continuous service as sexton of Lake View Cemetery, Jamestown, N. Y., and member of the Association of American Cemetery Superintendents, died on May 8, 1897. His was a record of faithful service. The Cemetery Association has recently appointed Perry W. Goodwin to fill the vacancy.

RECEIVED.

Allegheny Cemetery, Allegheny, Pa., President's and Superintendents' Reports for year ending June 25, 1897.

Die Preisvertheilung auf der Ersten Sonder—Ausstellung der Allgemeinen Gartenbau—Austellung in Hamburg, 1897.

Cemetery officials who are desirous of assisting their lot owners in the selection of artistic memorials should have a collection of monumental designs for that purpose. An opportunity is afforded for making a choice collection of this kind by THE MONUMENTAL NEWS International Edition. This publication furnishes examples of every variety of monumental work, many of which are reproduced from original drawings made expressly for that journal. Five plate illustrations are issued each month in addition to those which appear in the text. A collection of these designs kept in cemetery offices or waiting rooms where they can be seen by lot owners should be a valuable aid in varying the character of memorials erected.

*

PARK AND CEMETERY is in frequent receipt of requests for plans of receiving vaults, cemetery offices, gateways, shelter houses, etc. The illustrations of improvements of this character that have been illustrated in these pages in the past are valuable in the way of offering suggestions to those who contemplate similar improvements and to the end that PARK AND CEMETERY may be of greater service in this direction we ask our readers to send in sketches, plans or photographs of any improvements of this nature. These should be accompanied by a brief description with such particulars in regard the structure as will be of most interest to the readers of PARK AND CEMETERY.

CATALOGUES.

The Charter Gas and Gasoline Engine. Charter Gas Engine Co., Sterling, Ill. The Charter gas Engine is proving itself a valuable motive power, using gasoline, as well as manufactured and natural gas. It is simple and substantial and is giving unqualified satisfaction. The Woodlawn Cemetery Association of Green Bay, Wis., is using a No. 3 "Charter" to drive its pump, giving 150 gallons per minute against a 60 ft. pressure, and they state it to be "very economical, and any ordinary man can run it." Catalogues may be had by readers of PARK AND CEMETERY.

PARK AND CEMETERY.

Devoted to Art Out-of-Doors,—Parks, Cemeteries, Town and Village Improvements.

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CONTENTS.

EDITORIAL—CONVENTION OF ASSOCIATION OF AMERICAN CEMETERY SUPERINTENDENTS—SMALL PARKS.....	125
INSTRUCTIVE PARKS AND CEMETERIES.....	126
THE CONVENTION OF CEMETERY SUPERINTENDENTS AT CINCINNATI	127
EXCERPTS FROM THE DOG-EARED NOTE BOOK OF A TRAVELER AND OBSERVER	127
*THE PETER COOPER MEMORIAL, NEW YORK CITY.....	129
THE PARKS OF NEW YORK CITY.....	130
*BLOODY ANGLE, OR HIGH WATER MARK, GETTYSBURG	132
MEDICINAL PLANTS.....	133
*GARDEN PLANTS, THEIR GEOGRAPHY, XXI.....	134
*OFFICE BUILDING, RIVERSIDE CEMETERY, NORRISTOWN, PA.—GARDENS OF THE BIBLE.....	136
*HARLEIGH CEMETERY, CAMDEN, N. J	138
*FAMOUS MONUMENTS OF BERLIN	140
CHRIST EPISCOPAL CHURCH AND GRAVEYARD, ALEXANDRIA, VA.....	142
*A FOLIAGE BED AT WEINBURG, SWITZERLAND—SOME HANDSOME MICHIGAN ANNUALS	143
NOTES.....	144
CEMETERY TOPICS.....	145
SOME COMMERCIAL WOODS OF AUSTRALIA.....	146
PARK NOTES.....	147
CEMETERY NOTES.....	148
CORRESPONDENCE—LEGAL	149
PUBLISHERS' DEPARTMENT.....	150

*Illustrated.

THE convention of the Association of American Cemetery Superintendents to be held in Cincinnati, O., September 14, 15, 16 and 17, is an annual event, the influence of which has been a telling one since its organization some ten years ago. It is only necessary to recall the conditions of our cemeteries at that time, and compare them with the improved conditions of to-day to realize that a revival of interest and an intelligent understanding of the true requirements of the cemetery has been the stimulus to bring about so apparent a reformation. And to the Association of Cemetery Superintendents must be credited an important share of the result. Some of the best results of association as a principle have been manifested in the career of this association, and the field of its work was such that the interchange of opinion, the discussion and correlation of practice, and the mutual acquaintance and consequent respect for diverse opinion which it has brought about, has tended to create a sort of harmonious concert of action in cemetery work in all parts where the direct

influence of the association has been experienced. Progress in modern cemetery work has been made easier and the problems involved shorn of their difficulties by the multiplied intelligence brought to bear upon them. But the potent factor in this progress, and in which, however, the association also shares, is the increasing public recognition of its duty towards the depositaries of its dead. It is very gratifying to note from so many sources the interest now being manifested in cemetery affairs by the general public, for this means brighter prospects for the superintendent, more sympathy with his work, and the care of burial places a pleasure rather than an irksome necessity, throughout the land. It would be well for the coming convention to consider the question of stimulating general interest in the cemetery. Much has been done, but much has to be done. The literature distributed should not be of the waste paper order, but should carry enough attractiveness to warrant its care at least for a time, and the investment therein would be a rich one. But the preliminary programme for the coming meeting given in another column suggests that progressive development is still active, and that the discussions on the topics proffered will result in renewed activity in the good work of cemetery improvement.

THE question of small parks in the congested districts of our larger cities is becoming a vital one, engaging the attention of all interested in the general welfare. It is difficult of belief that in large cities there should be found numbers of children who have scarcely ever seen the grass, or know what it is to revel in its cool enticement, but the workers in the slums assure us that such instances are common. It is scarcely credible but for the authority, and the question of small parks, therefore, becomes an obligatory one on the communities involved. In point of fact, while the difficulties in certain situations seem insurmountable, the older cities, notably New York and Philadelphia, are adding to the number of such breathing spaces annually, and the attention of Chicago is now so forcibly drawn to the matter, that its mayor has declared publicly that he will exert all his influence to inaugurate a scheme of improvement so vital in its influences. In all large cities there are numbers of small areas, no matter of how limited an extent, which might be transformed into pleasure spots. Many of the intersections of diagonal streets afford opportunities, at comparatively small expense for possible damages, for establishing small parks and playgrounds, and the fear of oppo-

sition from blind and selfish land owners can be readily discounted by the knowledge that public opinion and public act can be relied on to subdue it. We live in a poor age for the cultivation of selfish ideas, and the examples of beneficence in the line of memorial parks and public benefactions stimulate philanthropic activity. The improvement of the public school grounds has been often suggested in these columns, and their availability for recreative purposes for other children than the immediate scholars is being considered, at least for the period of school vacation. Such an idea might be commendable, but only as a makeshift. Every large city must take steps to provide sufficient open areas for the health and welfare of its citizens; the times demand it; and the school yards should be improved most certainly, but on lines that will meet the progressive ideas of those whose life work is the education of our children. The barren spot now generally denoting the school yard carries nothing elevating or restful in its appearance. The change is too abrupt from the Elysian fields through which the children have been passing in their morning exercises to the unkempt patches which greet them as they leave the schoolhouse.

INSTRUCTIVE PARKS AND CEMETERIES.

The writer of this article has for years pointed out with clearness that public grounds should be planted in such manner that a marrying of beauty and instruction should be consummated. It has not at all been realized. In the planting of grounds in the natural style two methods of grouping are common. One may be termed extremely heterogeneous, and composed of common nursery stock often supplied and planted by contract. The other frequently attempted may be styled the scientific style of grouping, much more comprehensive, and abounding more fully with representative beauty. In the hands of a master it ought in the nature of things to yield a maximum of variety, a plethora of loveliness.

It has been largely confined to gardens or parks for instruction, commonly called botanic gardens and arboretums. They have succeeded admirably in bringing together vast aggregations of material, much of it useful, but often with a large percentage which would be better excluded from a park picture. Close and careful selection has been neglected, and the result has been correspondingly unsatisfactory. Groups in such grounds have been based upon the *genus* or the *order*, both of which are commonly monotonous individually, and linearly disposed more heterogenous collectively than the selections of the nurseryman. This circum-

stance has led to the retention of the grouping of the ancients in all the botanic gardens. They have divisions for trees, for shrubs, for herbs, for bog plants, for water plants, for medicinal plants, and so on, widely separated, and without the least relation to any comprehensive sequence or artistic effect. It is difficult for the advanced student to connect them, and impossible for the novice. Accidentally one may see the herbs of an order used to embellish the trees and shrubs, but such affinity of planting is the exception, and cannot indeed be carried consistently through the orders. They often lack trees, or shrubs, or herbs. In any climate of the world they are sure to prove an incomplete series. They are defective either for purposes of instruction or embellishment. They should have been abandoned long ago as the basis of a garden group. They are too narrow, and a striving after the unattainable.

A group of plants intended for ornamental purposes needs variety of form and colors, harmony, contrast and prolonged changeableness of display. A single genus, or a single order rarely or never affords these essentials, and a whole composed of defective parts must be itself defective.

If anyone will examine the multitude of arbitrary plant groups proposed by scientific men he will soon be convinced that they are but rarely adapted to the production of a well balanced picture on the ground. As dabs of paint on a plane of paper they are dotty, but may make a brave show. When they project their discords of form on the living landscape they are horrid.

In our climates, however, three or four thousand or less of select and variable species may be grown, and disposed in some fifty groups representing numerous tribes, together embracing all that is most desirable for embellishing the landscape and stamping it with character and beauty. These again are resolved into six divisions in the prolific sub-tropical and tropical regions, or four divisions in temperate regions where the lilies, palms, grasses and ferns are non-arboreal.

The elaboration of planting material on such a basis artistically must necessarily combine instruction, for it would correspond with the teachings of the simplest and best of the scientific schools.

The task is not one to be undertaken lightly by beginners.

The mere arrangement of the names correctly and in sequence is no light labor, but when in addition it is undertaken to make each group not only perfect in itself, but a component part of a perfect whole presenting four or five distinct phases of coloring during a season, one of which may be in unison over the whole area during any summer

month, I think it nonsense to place politicians in a position to frustrate such a study for the sake of a nurseryman's commission, or the hope of his fertilizer orders!

Such men will never make the land we live in more beautiful.

J. MacP.

THE CONVENTION OF CEMETERY SUPERINTENDENT'S AT CINCINNATI.

The Executive Committee has decided upon the following programme for the convention of the Association of American Cemetery Superintendents, to be held at Cincinnati, O., September 14, 15, 16 and 17, 1897. The Grand Hotel has been selected for headquarters. It is convenient to the Grand Central Railroad Station, and the managers have assured the committee that everything possible for the comfort and convenience of the members and their friends and the work of the convention will be done. The rates for American plan are \$3.00 and upwards; and on the European plan \$1.00 and upwards. The following program has been arranged:

Programme.

SEPTEMBER 14, FORENOON SESSION.

Meeting will be called to order at 9 o'clock.

Reception of new members and roll call.

Address of welcome by his honor, the mayor, Gustave Tafel. President's address.

Secretary and treasurer's report.

Communications. Appointment of committees.

Informal discussions.

Paper, "The History and Usefulness of the Association of American Cemetery Superintendents," by Mr. Chas. Nichols.

Recess for lunch.

AFTERNOON AT 2 O'CLOCK.

Trolley ride in special cars through the city and suburbs.

EVENING.

Meeting called to order at 8 o'clock.

Paper by Mr. Wm. Stone, "The Influence of the Association."

Paper by Mr. Sidney J. Hare, "The Influence of Surroundings."

Paper by Messrs. Earnshaw & Punshon, "Landscape Engineering as Applied to Cemeteries."

SECOND DAY—SEPTEMBER 15, FORENOON.

Roll call at 9 o'clock.

Paper on "How to Make and Maintain a Lawn," by Mr. G. H. Scott.

Paper, "A Lady's Experience in Cemetery Management," by Mrs. E. E. Hay.

Question box.

Nomination of officers.

Review of the St. Louis meeting by Mr. O. C. Simonds.

AFTERNOON.

Take cars at 1:30 for the Art Museum, Eden Park, and the Zoo, returning to the city at 6 p. m.

EVENING.

Meeting called to order at 8 o'clock.

Election of officers.

Paper by Mr. Chas. Dury, "A Half Hour with Insects Injurious and Beneficial."

Paper by Mr. A. McCullough on "Grass Seeds and Weeds."

SEPTEMBER 16.

It is proposed to spend the day in going to Dayton, O. The directors of Woodlawn Cemetery, that city, have extended an invitation to the association to visit their Cemetery and the Soldiers' Home.

SEPTEMBER 17.

Take carriages at the Grand Hotel at 8:30 for a drive through Burnet Wood Park, Clifton, including the beautiful grounds of Henry Probasco, Esq.; thence to Spring Grove Cemetery. After driving through the cemetery will go to Chester Park for lunch. After lunch will return to Spring Grove Cemetery, and there spend the afternoon, returning to the Grand Hotel by street cars at 5:30 o'clock.

At 7:30 a banquet will be served at the hotel, Mr. Howard Saxby presiding as toastmaster.

EXCERPTS FROM THE DOG-EARED NOTE BOOK OF A TRAVELER AND OBSERVER.

II.

At Edinburgh Castle, behind the battlements on the north side of the fortress and just in front of the battery, is a dog cemetery. Such an institution exists in one or two English garrison towns likewise, probably implying the British soldier's fondness for his dog. That at Edinburgh Castle is filled with stones, erected to the memory of regimental pets, with the names of corps and dates thereon, the latter going well back to the beginning of the present century. The spot is much neglected of recent years and is not open to the general public, though the castle guides, as a rule, point it out to visitors.

* * *

In the disposition of their dead, the customs of the Parsees of India are more nearly consistent with the principles which they profess than any other people. They are fire worshippers and the underlying principle of their religion is a veneration for the elements. This prevents the resort to fire, mother earth or water, in disposing of the dead, as the dead would be a pollution of an element which stands in the relation of a deity to them. Hence, the Towers of Silence,—the first erected over two centuries ago,—provide a system of disposing of dead bodies, by which it is supposed that none of the impurities of the corpse can affect the elements.

The Parsees are an esoteric sect and none of their religious customs was more secretly guarded from exposure than their mode of sepulture, until,

PARK AND CEMETERY.

at the earnest request of the Prince of Wales, the veil which hid the funeral customs of the Parsees from the most intrusive curiosity of the public, was lowered. Up to the time of the Prince's visit, between twenty and thirty years ago, it is doubtful if any stranger had ever visited the Towers of Silence, or ever expected to see them. The gate that opened to the towers was sternly inscribed: "None but Parsees may enter!" The rule of secrecy once broken for the Prince of Wales, has ever since been relaxed; and he that now visits Bombay and fails to see the Towers of Silence, leaves that city but partially seen. And if he visits the towers, the processes there employed will be fully described to him, with the assistance of a model of a tower, probably the same as that used in the demonstration to the Prince of Wales.

The location is the southwesterly corner of Bombay Island, where a hill rises rather suddenly from the low plain to the height of about two hundred feet, bearing the name of Malabar Hill. The summit of this hill commands the finest view to be had in that vicinity of what has often been called one of the choicest scenes in the world. This summit is reached either by a long succession of terraces and flights of steps from the south, or by a costly carriage road at the north, made at the expense of one Sir Jamshidje, in memory of his father. But the carriage-way extends only a quarter of a mile or so, and then the visitor had to proceed up a long, rocky ascent until he reaches an iron gate in a high wall encircling the hill. Within the gate are beautiful gardens, quite as well kept as the garden of any English nobleman, filled with flowering shrubs, palms and cypresses, suggestive of sacred silence and peaceful rest. Chapels, or houses of prayer, are provided, wherein the Parsees in attendance at a funeral may perform their devotions, enjoying meanwhile the beauties of flowers and shrubs and magnificent views, and much else, to dispel the gloomy thoughts which some parts of the process of disposing of their dead might engender.

The towers, six in number, are (with one exception) circular and are constructed of huge slabs of hardest black granite, so well cemented that even the oldest has required no repairs during the two hundred years of its existence. This oldest tower was built when the Parsees first settled in Bombay and is reserved for the use of a certain family. The circular walls are from twenty-five to forty feet in height, according to the inequalities of the ground upon which they are built. They are wholly destitute of ornament, and without roofs, that the sun may beat upon the floors when passing the meridian, and that the vultures may have free access to them. The exceptional tower above re-

ferred to is a square one, used only for the bodies of criminals.

There is but one aperture in the external wall of each tower, and that is about five feet square and thirteen feet from the ground. It is reached from without by a flight of stone steps. Within the tower there is a circular platform upon a level with the aperture through the wall, slightly depressed toward the center, where there is a well about ten feet in diameter. By means of raised walks, three of them having the well for a centre, and the others radiating from the well to the outer wall of the tower, the surface of the stone platform is divided into three series of open stone coffins.

A corpse is brought up the rocky ascent, accompanied by Parsees, clothed in white, linked in pairs for some mystical reason. The bier consists of a curved metal trough and is carried by four men who alone are allowed to enter the tower. They are, in fact, official corpse bearers. The mourners do not approach within thirty feet of them, and as the corpse reaches the flight of steps beside the tower, the mourners turn aside into one of the prayer houses. Upon being brought within the tower the corpse is deposited in one of the stone coffins. If it is that of a man, it is placed in the first series or outer circle of coffins. If of a woman, it goes to the middle or second series. If of a child, it goes to the circle immediately surrounding the wall. To fulfill the Zoroastrian saying, "Naked came I into the world, and naked shall I go forth," all the corpses are left absolutely naked in the tower. Immediately the vultures swoop down upon the corpses and in a few minutes time they have done their work and every particle of flesh is stripped from the bones, which are then left to bleach in the sun and wind until they become quite dry. Two carriers with gloved hands and implements resembling tongs, then carry them to the central well, where they are left to crumble to dust.

Through perforations in the wall of this well any moisture, caused by rains or otherwise, passes, and descending into two drains at the base of the building, percolates through charcoal, and thus deodorized, runs into the sea. The dust in the well accumulates so slowly that it has only risen about five feet in the largest tower during the forty years it has been in use.

Those who deposit the bodies in the tower have to go through a process of ceremonial purification, and a special tower is devoted to the reception of their garments, (which can be worn but once in the tower), and where the clothes of the corpse also moulder away.

THE PETER COOPER MEMORIAL, NEW YORK CITY.

Just south of the Cooper Institute, New York, there stands at last a memorial to the man who erected the Institution, which bears his name, for the benefit of his fellow man, and who stands as a model of wise philanthropy wherever the English language is known.

This is not too broad an assertion, for the vast number of young people who have derived benefit from the Cooper Institute, and have promulgated a knowledge of its usefulness as a measure of gratitude, have come from all quarters and gone to all quarters, to establish the truth of the statement by the pursuit of useful lives, whose impetus obtained force under the careful training imparted at Peter Cooper's helpful school.

It is no wonder it was generally remarked that at the unveiling ceremonies attending the dedication of the beautiful monument, so much voluntary service was forthcoming to make the services impressive. And no wonder that it was further remarked that this was due to the grateful sentiment still pervading the community for the great benefaction that the philanthropist had bestowed upon the generations to follow him.

After all notwithstanding the artistic merit of the monument erected to his memory, the enduring memorial is the Cooper Institute, for it not only stands as a constant reminder of the great hearted man, but it was a labor of love of his life, put into active operation under his wise guidance and supervision, and he lived to see the promises of its great usefulness fulfilled before he departed, full of years and honor. When he died in 1883 he was in his ninetieth year.

The classic memorial herewith illustrated was

unveiled on May 29 last, with simple but impressive ceremonies.

The base of the monument, which is 22 feet by 24 feet by 4 feet high, is of Milford pink granite with cut faces, and the shafts of the columns are also of polished pink Milford granite.

The pedestal, the back, bases and capitals of columns, and the entablatures are of Knoxville



THE PETER COOPER MEMORIAL, NEW YORK CITY.

pink marble, hone finished.

The bronze statue, which was modelled by St. Gaudens, is set upon a pedestal standing 6 feet above the base, upon which the bronze inscriptions are affixed. The entire height of the monument is 25 feet from the ground. The architectural accessories of the memorial were designed by Mr. White of McKim, Mead & White, architects.

THE PARKS OF NEW YORK CITY.

The June issue contained an article on "Some Early History of the Parks of New York City," which appeared in the Brooklyn *Daily Eagle*, compiled from addresses on the City's Parks, delivered before the New York Historical Society by Mr. Gherardi Davis. From the same source the following continuation of the above is taken:

Central Park has an area of 840 acres, being a little more than two and a half miles long and something over half a mile wide. The reservoirs and transverse roads take up about one hundred and sixty acres, and the water in the park covers an area of about forty-four acres. The northern and southern ends of the park are very different in character. Between Fifty-ninth and Seventy-second streets the ground is undulating, and does not show the rough characteristics found in the northern end of the park. The lower end of the park has been laid out with greater care, as far as grass plots and flower beds are concerned, and in general has been much more embellished than the upper part of the park. The natural condition of the land calls for this, the rocks and gullies in the upper part of the park not requiring anything like as much attention to make them effective. This part of New York was described at the time it was taken for a park, as a rough country, covered with thickets and swamps. There were numerous shanties scattered over the land, and the land was covered with a rank growth, all of which, of course, has disappeared and been replaced by fine trees and beautiful lawns.

At the northern end of the park, along the line of hills which there crosses the city, are to be seen some remains of the block houses and redoubts erected in 1812. They are sometimes spoken of as having been erected in revolutionary times. This, however, is an error. The famous McGowan's pass, which led across these hills, can no longer be accurately traced, but in general it may be said to have gone diagonally across the northeast corner of the park about where the east drive now runs from the tavern to One Hundred and Tenth street. The water which lies to the right of the road is the westerly end of what was formerly Harlem creek, a branch of the Harlem river, which extended into the island as far as this, and into which various streams of water still flow through the park, drained.

The cost of the land taken for Central Park was over \$5,000,000, and upward of \$15,000,000 has been expended for its construction and maintenance. It is said that the land covered by the park is now worth over \$200,000,000.

Under the wise and liberal system of improve-

ment which has proceeded uninterruptedly since its creation, Central park has become one of the finest and most beautiful pleasure grounds in the world. Its kaleidoscopic landscape views, spacious, winding driveways, broad promenades, wild wooded nooks and rocky projections, its leafy walks and disappearing bridle paths and many artistic groups of statuary contrive to make it a constant delight to the people and an educational factor in their artistic life which cannot be too highly estimated. In natural beauty Prospect park, Brooklyn, has the advantage, but so cunningly has artifice been employed in Central park that it stands to-day the most finished product of landscape architecture to be found in the country. The central promenade of Central park is the mall, a quarter of a mile long and 208 feet wide, bordered by double rows of elm trees and famous for its notable collection of statues, prominent among which are Shakspeare, by J. Q. A. Ward, erected on the three hundredth anniversary of the poet's birth; Burns and Scott, both in sitting posture; the "Indian Hunter," by Ward; Fitz Greene Halleck, and a colossal bust of Beethoven. Not far away are the music pavilion and the terrace, a sumptuous pile of richly carved masonry, the lake and the famous Bethesda fountain designed by Emma Stebbins and made in Munich. Beyond the lake is the Ramble, a place of many footpaths through thickets and by the side of rocks and streams, passing a bust of Schiller, rustic cabins, gorges and waterfalls. Still further on are the Belvidere, a great stone tower, from which a fine birds-eye view of the whole park and city is to be had, and the reservoirs. Near by the latter stands the obelisk, a monolith relic of an age dating back more than fifteen centuries before the birth of Christ, which was presented to the city by the late Ismail Pasha, Khedive of Egypt. It is of granite, about 70 feet in height and weighs 200 tons. The four sides are covered with hieroglyphic figures. Opposite the obelisk and near the Fifth avenue entrance, at Eighty-third street, is the Metropolitan Museum of Art, containing the finest collection of pictures in America. The American Museum of Natural History is situated just outside the park, on the western side of the city.

Northwest of Central park is Morningside park, laid out along the easterly slope of the hills which run along the Hudson river at this place. The westerly slope of these hills is taken up by Riverside park, which stretches from Seventy-second street to One Hundred and Twenty-fifth street. On the top of these hills, about where Columbia college now stands took place the last part of the battle of Harlem heights. Riverside drive, which was acquired in 1872, was first opened to the pub-

lic in 1880. The drive is complete with the exception of a bridge which is to be erected across Ninety-sixth street, but the park is fully completed. Grant's monument, which was unveiled in April, stands on the highest point of the park near One Hundred and Twenty-fifth street. North of this, at Claremont, the land drops very abruptly to the north and west and from there an unrivaled view of the Hudson can be had.

The commission of 1807 laid out between Third and Seventh avenues, and Twenty-third and Thirty-fourth streets, an enormous parade ground, which, however, was never carried out, the land never having been acquired by the city. The only square in this area is Madison square. It is very evident that the government of the city at that time did not look as far ahead as the city has done during the past twenty years, especially when the parks north of the Harlem were laid out.

To the other smaller parks on Manhattan Island it is only necessary to refer briefly. Madison square was originally laid out in the latter part of the last century as a potter's field for the burial of paupers. The potter's field was, however, soon removed to what is now Washington square. On Madison square the United States government at the beginning of this century erected an extensive arsenal, which was afterward abandoned.

Union square, Tompkins square and the other small parks of the city do not call for any particular mention, but it may be generally stated that of the parks south of Fifty-ninth street only those which have been laid out within the last few years were originally planned as parks or for the use of the people generally. In most every other instance they were used as parade grounds, or, as we have seen, for market and other purposes, some are the result of gradual growth.

Bryant Park, comprising almost five acres of land lying between Fifth and Sixth avenues and Fortieth and Forty-second streets, has been selected as the site of the new great public library, formed by the consolidation of the Astor and Lenox libraries and the Tilden fund. The old reservoir, one of the chief landmarks of the modern city, is to be torn down to make way for the new structure, which will probably be erected at public expense. The legislature has authorized the transfer of the land for this purpose, and it is expected that the work of removing the reservoir will begin within the present year.

The park system north of the Harlem river, which was laid out pursuant to an act of the legislature passed in 1883, provides for nearly four thousand acres of park land, consisting of three

large parks, Van Cortlandt, Bronx and Pelham Bay, and three smaller parks, Crotona, Claremont and St. Mary's. The larger parks are connected by parkways, a wise provision, as they will not only beautify the city when this part of New York is built up, but will also provide a means of reaching one park from another without going through the streets. Of these new parks both Van Cortlandt and Pelham Bay cover more acres of land than all of the parks on Manhattan Island together. Pelham Bay Park covers 1,700 acres, being the largest within the city limits. It was laid out especially with a view of having a water front, and it needs no description to recall to anyone who has been on the shores of Long Island Sound in summer the beauties of the park at this point.

Van Cortlandt Park covers an old estate once owned by the Van Cortlandt family. The old manor house still exists. Near it is a hill known as Vault Hill, so called from the vault which was used as a burying ground by this family. The American troops during the revolution were stationed at various times along the hills at this point; the British troops were very near them to the south. The easterly end of Pelham Bay Park was the site of a sharp action between a small number of Americans and a large party of British just before the battle of White Plains.

Bronx Park has been laid out on either side of the Bronx river, through what was once the old De Lancey estate, afterward in part owned by the Morris family. The river winds through the park and the vegetation on its banks shows no sign of having been touched by human hands. In this park are to be constructed the botanical gardens and the zoological gardens. The park contains various curiosities, among others an old pine tree, known as De Lancey's pine, which is known to have existed for many generations. Bronx is one of the most beautiful of New York's parks. Within its limits are to be found the wildest bits of scenery obtainable in the vicinity of the great city, while the running river stream affords a charm, constant, but ever varied and novel. Here nature has been left alone and the artificial has no part in the general scheme of beauty that meets the delighted visitor's view. It is possible to wander there without having the fact of the nearness of the city borne home to one. Thus in many respects Bronx is the most fascinating pleasure ground in the greater city.

Numerous other parks are being laid out in the city, and the necessity for further parks has become so apparent that enormous sums of money have been spent for acquiring land in districts occupied by tenements, in order to provide breathing spaces for the people, especially in summer.

PARK AND CEMETERY.

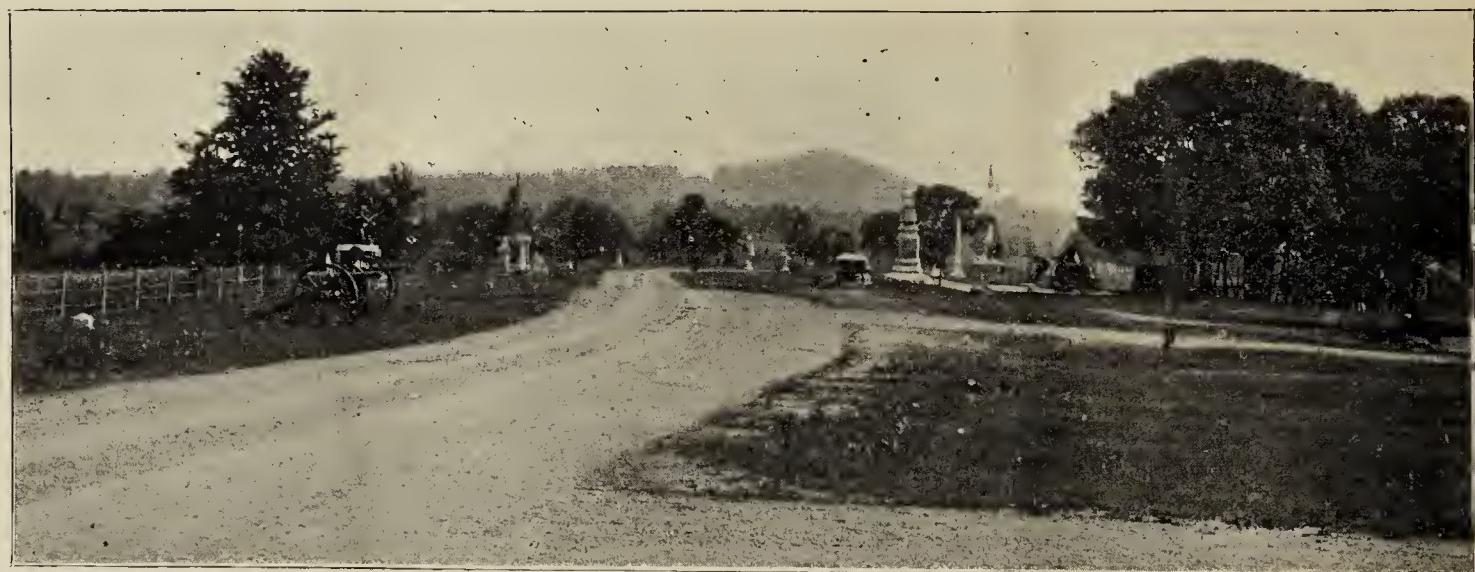
BLOODY ANGLE, OR HIGH WATER MARK,
GETTYSBURG.

The illustration presented with this represents a portion of the battlefield of Gettysburg which will be famous in history always. It is what is known as Bloody Angle, or High Water Mark, being the crest of Pickett's charge in that memorable battle, the grove of trees well marking the place. It is conceded that the repulse of the enemy by the Union troops at that point on that day virtually closed the battle of Gettysburg, and that from that day the fortunes of the confederacy waned, hence the interest which centres about the spot.

The illustration shows the grove of trees, Hancock avenue, the various monuments erected by the commands which fought along the line, while far away in the distance is Big Round Top, an observa-

On the right, the triangular looking one is that of the 72nd. Pa., which, as the stone tells us, lost in the battle 10 officers and 102 men.

Right in front of the grove of trees will be noticed a tablet, flanked on each side by a cannon. One page of the tablet is headed "High Water Mark" the other, "Repulse of Longstreet's Assault" and then follow details of the event. The guns and square monument nearer to the road belong to Cowan's New York Battery, the tall monument, to the 1st. Minnesota regiment, and the very tall one to the right and beyond the tree, has been erected by the state of Vermont. The inscription on it reads, "Vermont in Honor of Her Sons who Fell on this Hill." The little marble markers seen here and there, show the right and left of the battle line of the various commands.



BLOODY ANGLE, GETTYSBURG, PA.

tory crowning it, with Little Round Top, a little nearer and to the left of it, where the outlines of a few monuments can be seen. The monuments as shown in the illustration are similar to what are to be seen the whole length of the 20 miles which comprised the battle front. From Big Round Top, the left of the Union line to Powers Hill, its extreme right, the distance is 20 miles, and monuments have been erected the whole distance to indicate the position each battery or regiment occupied.

Sometimes the lines are in tolerably straight rows, but at the Bloody angle where the contest was unusually severe, there is quite a cluster of monuments, encircling the grove of trees, as partially revealed in the picture. The monument first on the left is that of the 1st. Pa. Cavalry, the guns are those of Brown's Battery, R. I. Light Artillery. The tall monument next to it, surmounted by an Indian Wigwam, is that of the 42nd. New York Infantry. (Tammany.)

The tall spreading tree which is seen between the Minnesota and the Vermont monuments, is a butternut, of which there are a great many about Gettysburg. This one tree is of good size, and stood there during the battle, and, undoubtedly, is full of bullets, as are all the large trees that stood in exposed places. It is rather singular that of the thirty trees or thereabouts that compose the group shown at the Bloody Angle, all but about two are the Rock Chestnut Oak, Quercus Prinus Montana. Usually this species is only to be found on rocky eminences, such as Big Round Top, and where these are it is neither elevated nor rocky.

The battlefield can now be reached readily at all points, owing to the nicely graded macadam roads which have been constructed, rendering either driving or walking a pleasure. In excavating for the roads bullets are continually met with in places where the battle raged, and, occasionally a skeleton is unearthed, the remains of some "unkno wn

to whom no monument had been erected. It is undoubtedly a fact that there are many of these entirely "unknown" on the field. But with marble above them or not they assuredly:

"A loftier monument command,
The Mountains of their Native Land."

One cannot traverse the battlefield at any time without meeting with those who recognize what sacrifices were made by those who fought on the field. Almost every Northern home, certainly every hamlet, could say of some member of it, *killed at Gettysburg* or *wounded at Gettysburg*, so that may we not say of this field,

"Long shall thine annals and immortal tongue
Fill with thy fame the youth of many a shore;
Boast of the aged! lesson of the young!
Which sages venerate and bards adore."

Joseph Meehan.

MEDICINAL PLANTS.

An illustrated lecture on "Medicinal Plants" was recently delivered at the American Museum of Natural History, New York, in the popular course of the Columbia University by Prof. Smith Ely Jelliffe. The following abstract is from the *New York Sun*:

He traced the development of the science of botany from the primitive period, when doctors were botanists, pharmacists and physicians, to the present day, when the pharmacist has become the expert middleman, whose skill in compounding the medicinal virtues of plants and exact knowledge of drugs have rendered it unnecessary for the physician to bother his head about botany. He enumerated the herbs and plants and flowers that were supposed in the days of the forefathers to possess medicinal virtues, but have since been shown to be worthless, and described those now highly prized because of real curative qualities.

First of these, he said, is the May apple that grows in abundance along shady streams and along the fences of cultivated fields all the way from Canada to Florida. Aside from its beauty of bloom and its pulpy yellow fruit, it has a medicinal prize in its root from which are manufactured podophillum pills. The foxglove, too, that grows in stately clusters in old-fashioned gardens, has a virtue in its leaves that was known as early as the sixteenth century. From it is made digitalis, a drug of great merit in the treatment of heart trouble. Witch hazel, which formerly yielded a medicine used exclusively for bruises and sunburn, has lately been found to have great value still in the treatment of skin disease, the later discovery being the tincture that is extracted from the branches and leaves of the last flowers of the year. The poison hemlock, which has been transplanted here in waste places from Europe and Asia, yields the poison which it is supposed Socrates took for his fatal draft, and which is used now in the treatment of cancer and nervous diseases. Monk's-hood, a beautiful plant with blue flowers that is cultivated for purely ornamental value in well-kept gardens, yields aconite. This lovely plant grows in all parts of the world, and it was known to the ancient Chinese for the

poison extracted from its root. It is a deadly poison. A single root, bruised and thrown into a tank of water will poison the entire supply. It is used efficaciously to depress the action of the heart. The green hellebore that decks the spring woods with strong fresh leaves and a spike of whitish blossoms yields another sort of poison, which makes its root valuable in veterinary medicine. Its worth as an insect and animal poison was known to the Romans, who used it to poison vermin.

The yellow-flowered, hairy weed henbane that grows here and in Great Britain has still different and distinct medicinal properties in its root and leaves. The extract of its leaves is administered to quiet maniacs in asylums. The root has an opposite effect. Belladonna, or the deadly nightshade, yields to the pharmacist the poison known as atropine, an overdose of which will produce delirium. A good many allied species of the plant grow here, although it is not indigenous to the soil. It belongs to the same family as the potato. Well-known cases are on record, by the way, of poisoning from the eating raw of very young potatoes, which seem to contain some of the deadly properties of the belladonna. Atropine is also obtained from the thorn apple, a very common poisonous plant which grows in vacant lots, and is recognizable by its prickly burr, and a white flower resembling the blossom of the morning glory. The drug it yields has been known to the Hindoos from the most remote time under the Sanskrit name of dhattoora. Belladonna and its alkaloids, although a menace to children, who are liable to eat its berries, is prized by oculists for its property of dilating the pupil of the eye, and by physicians for its quality of paralyzing the nerves in neuralgia and contracting the blood vessels in cases of inflammation arising from colds. Atropine is a perfect antidote for the poisonous mushroom.

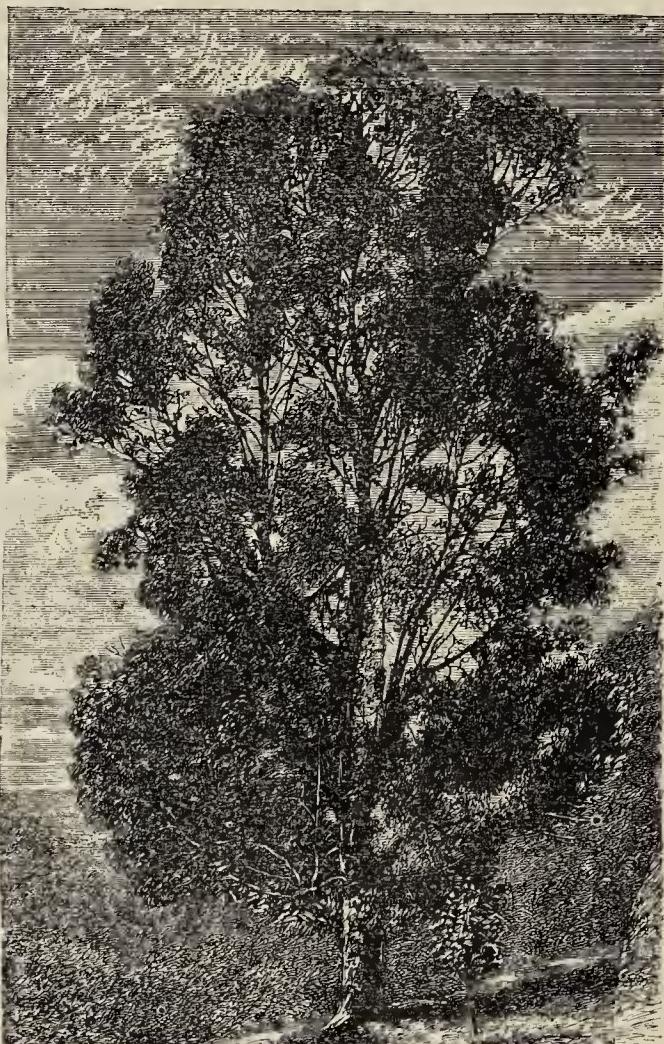
Prof. Telliffe described at length and entertainingly the manufacture of quinine from the bark. Of the discovery of this most valuable drug he told a romantic story. "We are told," he said, "that an Indian of South America, who was lying helpless in a wilderness, sick of violent fever, dragged himself to a pool of water near at hand to quench his burning thirst. After drinking he felt his strength gradually returning, and was eventually able to rise and go home. His experience excited the greatest surprise, as no remedy was then known for intermittent fever, and many visited the pool. The bitter taste of the water led to the discovery that it was impregnated with the properties of the bark of the trees growing at the gorge. Its virtue was not known to civilization, however, until it happened that the wife of the Viceroy of Peru was lying ill of the fever, and a Jesuit priest recommended that the bark be ground to a powder and given to her. The resultant cure was considered so wonderful that the Viceroy sent an expedition to collect the bark, and taking it to Spain gave away large quantities of it to the sick. The name of the Viceroy was Luis Geronimo Fernandez de Cabreray Bobadilla, fourth Count of Chinchon, and the scientific name of quinine chinchona owes its origin to the Countess of Cinchon, the Viceroy's wife, who was cured by the virtues of chinchona bark."

GARDEN PLANTS—THEIR GEOGRAPHY, XXI.

MYRTALES.

THE RHIZOPHORA, MYRTUS AND OENOTHERA ALLIANCE.

We have here an extensive and widely disseminated alliance in 27 tribes, 301 genera and 5,625 species. The trees and shrubs are mostly evergreen when growing naturally, and they are largely confined to the tropics. The common myrtle is the most northerly species, a native of Persia perhaps, but naturalized in Southern Europe. *Metrosideros lucidus* (as it used to be called) extends to 50 de-



EUCALYPTUS COCCIFERA IN THE SOUTH OF ENGLAND.

From *Gardener's Chronicle*.

gress south latitude in the Aukland Islands. *M. buxifolia*, attaching itself by its ivy-like roots and climbing the tallest trees, also extends well south in New Zealand. *Myrtus nummularia* (which I cannot now trace) used to be considered the most southerly small shrub of the alliance, growing like heather over the pastures of the Falkland Islands. In South Chili they have *Myrtus Cheken* and *Myrtus Ugni*, both of which, as well as the common varieties of myrtle (*not Vinca*), are hardy in the Isle of Wight, the southwestern counties of England, in

Central and Southern California, and South Florida no doubt. The Pomegranate in some of its varieties extends further north in the States than any truly myrtaceous shrub I know of, ripening its fruit, but becoming deciduous at Columbia, S. C., and in Georgia. The Lagerträemias are trees in the same latitudes. Seven or eight small trees of the alliance spill over, as it were, from the tropics to the south of Florida, and the "Keys" along the coast. The Mangrove, which is a tropical maritime plant, is found along the Gulf coast, sometimes growing to a height of forty or fifty feet. A few of the fruits are also grown in gardens at the extreme south, such as the guavas, the "Hill guava" of India, and the "Rose apples." Among ornamental shrubs *Callistemon speciosus* is said to stand very well, "if sheltered," as far north as the pomegranate.

It will thus be seen that none of the evergreen trees and shrubs are useful at the north, except for massing, or as specimens in summer.

The alliance includes, however, a great number of handsome herbaceous plants very well known to the gardens of long ago, and becoming again better known every year. These include both annuals, perennials, with some biennials, which require to be sown every year.

Rhizophora Mangle is one of the three or four species of the genus forming the Mangrove swamps along the tropical coasts of the world, and notorious for their extreme unhealthiness. Their seeds germinate in the pod, forming a radicle of some length and weight, which, dropping, dibbles itself into the soft mud of the tidal swamps; were it not for this provision the seeds would sometimes be floated away to deep water, where they couldn't grow, but even then the mangrove would spread, for it has aerial roots like a "Banyan," which take hold of the mud and form independent plants whenever the tops are broken by wind or wave. These roots raise the trees pandanus-like above the water, and the whole are inextricably crossed and confused, forming a perfect net to catch the flotsam and jetsam of the tropical rivers; the whole have been thus growing, decaying and extending for untold ages, building up immense forests on soil often unfitted to support the human foot. Oysters and other shell fish attach themselves to these roots, literally "growing on the trees."

Combretum is a considerable genus of 140 species, widely distributed throughout the tropical regions of the world having sufficient moisture for luxuriant vegetation, with a few species in South Africa. The genus has several sections, with scarlet, orange red, yellowish or white flowers. But few are known in cultivation. They are mostly fine

climbers of from ten to fifty feet or more high, but occasionally shrubby. Except in botanic gardens *C. purpureum* is the most common, and it is a very handsome plant, and hardy enough I feel sure for South Florida and California gardens. When a boy I had charge of an old standard plant, which flowered nicely every year, although always wintered in a cool intermediate house. In the Lal-Bagh at Bangalore, however, under the superintendence of my late lamented friend, Allan Black, there was a magnificent specimen covering the band stand, which flowered beautifully full during the dry season, in company with near-by Bougainvilleas and *Bignonia venusta*, etc. The climate of Bangalore is similar to that of Santa Barbara, Cal. I am under the impression that *C. racemosum* has some time been tried in South Florida, and some others may be tried, not with the expectation that they will rival or equal *C. purpureum*, however.

Terminalias are mostly trees, one or two of which yield from their fruits and gall-nuts the black dye known as "India ink." They are in cultivation, but not likely to be hardy except at the most extreme southern points, where, in Florida, *T. Catappa* appears to be adventive.

Quisqualis are climbers, they and the previous genus are mostly East Indian.

The species of the tribe *Leptospermeæ* are almost exclusively from Australia and the Indian Archipelago. They are often very handsome trees and shrubs, and growing as many do in climates of great heat and dryness, they ought to be sought for in Southern California. Some species of *Leptospermum*, *Callistemon*, *Melaleuca*, *Beaufortia*, *Tristania* and *Metrosideros* are admirable, thrive without much irrigation and may be had in Californian nurseries. *Metrosideros robusta* is a large tree, used a good deal by the colonists in shipbuilding. Generally the timber of Myrtales other than the Eucalyptas is liable to split in seasoning; some of the above mentioned genera, however, have species whose wood is almost indestructible under ground. Their flowers range in color from greenish to creamy, white, pink, purple and brilliant crimson. Many are called "bottle-brushes."

Eucalyptus is an extensive genus of 150 to 200 species, confined to Australia and the adjacent islands. One or two species form the tallest trees known in the world, reaching occasionally to 400 feet high, if my memory serves me. Mr. Walter Hill, formerly of the Brisbane Botanic Garden, measured a fallen one of that length, or over. Some species are mere shrubs. A few kinds have endured the climate of Southern England for several years—*E. pulvifera*, in fact, attained to twenty-five or thirty feet at Kew before it was cut down by

frost. To-day three Tasmanian species seem to be in the arboretum—*E. Gunnii*, *E. urnigera* and *E. coccifera*. Further south the latter species exists in quite a tree, as will be seen by the engraving of one we reproduce from *The Gardeners' Chronicle*. The "blue gum" cannot be so well depended upon where there is the least frost, because its immense growth fails to ripen throughout, and gets cut back. It will make ten feet or more annually, and in most frosty climates two or three feet of the top is as soft as a dahlia, yet I have had a well ripened plant endure 20 degrees Fahrenheit laid on the ground, and for a single night only. It had been condemned as too large, and remained outdoors until late November, was blown over, and then frozen, after which I pitied it, cut it back, potted it, and housed it another winter. It is well worth keeping for planting out where there are conservatories. In Southern Florida *E. globulus* is not the best species, but several of the slower growers do well. In California Eucalypti are well known.

Psidium in from 80 to 100 names if not species are the "Guavas." The best kinds are grown far south.

Rhodomyrtus is in five species. They are the "Hill guavas" of South India and Malaisia. *R. tomentosus* is a shrub of six or eight feet, with a habit similar to the myrtle, dull pink flowers, and fruit like a small green guava. Leaves and fruit are covered with a minute down. It has done very well on the South Florida "Keys" (islands).

Myrtus is in fifty or more species, many of which vary a great deal. They are natives for the most part of the sub-tropics of Western Asia, Africa, Australia, New Caledonia and America. *M. communis* in several forms has been so long naturalized in Southern Europe as to be like a native—as indeed it may be.

Eugenia is a large and handsome genus of some 560 or more species, with probably more to be discovered through the 15,000,000 or so of square miles yet to be explored in Tropical Asia, Africa, America, Australia and adjacent islands.

Several species have been grown with fair success in the open ground at the extreme south; in fact, a few are native to South Florida.

A large number of beautiful trees and shrubs belong to this and the preceding tribes, but as before remarked all are sub-tropical or tropical.

The *Lecythidæ* are exclusively tropical American; among other things yielded by some of its species are the familiar Brazil nuts of the shops, borne in curious vase-shaped receptacles, surmounted by lids, and growing on immense trees.

Trenton, N.J.

James MacPherson.

OFFICE BUILDING, RIVERSIDE CEMETERY,
NORRISTOWN, PA.

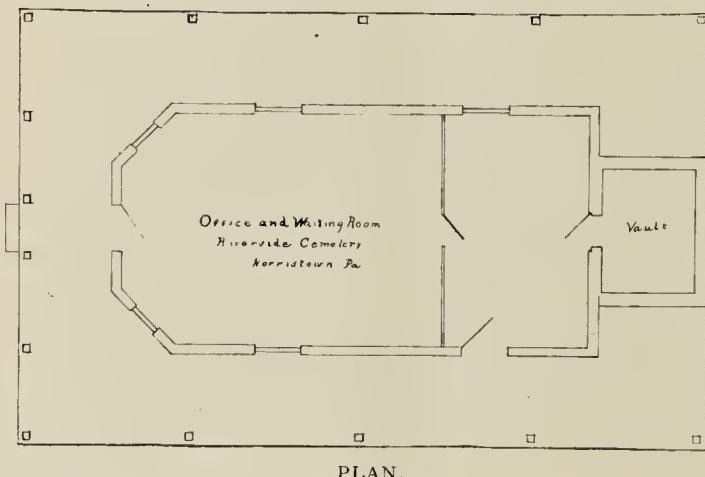
Attractive office and service buildings serve a two-fold purpose in all well ordered cemeteries as well as parks. They offer a permanent indication of the policy of the management on the one hand, and lend dignity and variety to the landscape features of the grounds, on the other. It is a wise policy on the part of all cemetery managers to pay particular attention to their buildings, securing the most artistic and well constructed structures possible within



OFFICE BUILDING, RIVERSIDE CEMETERY, NORRISTOWN, PA.

the limits of the funds at their command.

The illustrations represent the office building of Riverside cemetery, Norristown, Pa., which while cheap is neat and attractive in appearance.



PLAN.

Its dimensions are as follows: Outside including verandah 44 feet by 28 feet; inside 30 feet by 15 feet. A brick vault, 6 feet by 8 feet, constructed for the preservation of records, etc., opens out into the interior, and the office is separated from the waiting room by a railing with gate. The building is small but neat and commodious, meeting the requirements of a small cemetery such as Riverside. It is cool in hot weather and a desirable place in which to hold services when necessary. Its total cost was \$875. Mr. Bellett Lawson, Jr., superintendent, kindly furnished the photographs from which above illustrations are made.

GARDENS OF THE BIBLE.*

The number of gardens specifically mentioned in the Bible are few, but their interest and quality compensate for lack of number. They are, indeed, so individualized as to seem stamped with divine approval. For the Bible teaches that the existence of the human race began in a garden, that sin entered the world through a garden, that the first punishment of human transgressions was banishment from a garden, that Christ was betrayed in a garden, that the pathetic and awful tragedy of Christ's human life ended in a garden, and that the rock upon which the hope of a Christian world is based was rolled away from a tomb that lay in the midst of a garden.

Christians, therefore, cannot question the Biblical importance of gardens. But there are gardens and gardens. What is meant by a garden? Well, I hold that from Bible teaching it is safe to affirm that a garden in its best sense was in the beginning what it is today—primarily a place of beauty.

Not merely a place where individually beautiful or interesting plants and flowers are grown, but a place where the surface of the ground, water, rocks, trees, shrubs, vines, flowers and grass are thoughtfully arranged so that together they make a picture. A place where the general effect is more important than any one object, and where the combined objects make a view or series of views, in short, a landscape, large or small.

* * *

One must begin very near the beginning to find the first Bible garden, for in Gen. 2:8, we read: "The Lord God planted a garden eastward in Eden," and a little further on, "out of the ground made He to grow every tree that is pleasant to the sight and good for food."

Let it be noted that the fact of being pleasant to the eye is given precedence over economic value. Moreover, comments are found throughout the Scriptures that confirm this meaning. There are landscape settings for all important scenes and events, mountains, rocks and plains; hills, streams and valleys; the sowing of seeds and gleanings of wheat; the oil press and the vintage; trees, birds, the flowers of the field, the glory of the lilies—all are there. And who shall say how much they add to the sublimity and impressiveness of the wonderful histories. Take them away and the bare facts remain, though shorn of much that appeals to the minds and hearts of men.

It is clear from Bible descriptions that the garden of Eden had a mild climate, fertile soil and abundant water; that it had shade, for the Lord walked there in the cool of the evening; that it

*Paper read at a Sunday Evening Meeting of the Epworth League.

had that finest of garden attributes—seclusion, for without thickets of shrubbery Adam and Eve would have made no futile efforts to hide from the wrath of their maker. The beauty of its trees was so great that they are frequently referred to; admirable qualities of most highly esteemed men are compared to them as, for instance, in speaking of the Assyrian King as a Cedar of Lebanon it is said, "I have made him fair so that all the trees that were in the garden of God envied him."

That the garden as a whole was a model is shown by side lights rather than by direct testimony.

In Isaiah 51:3, we find, "For the Lord shall comfort Zion; He will comfort all her waste places; and He will make her wilderness like Eden, and her desert like the garden of the Lord," and Ezk. 36:35, "and they shall say: this land that was desolate is become like the garden of Eden."

This place of delight must have been made up of open, grassy glades fringed with blooming flowers, belted with shrubbery and grouped with splendid trees; along the flowing streams aquatics flourished, in quiet pools the water lily floated, in shaded glens lush ferns abounded and lovely vines wove flower-decked draperies. It was a place where the beautiful and harmless creatures dressed in feathers and fur, that what the Lord had made could live out their free, unhampered lives, just as the same wild birds and small animals should now be free to live in the groves and trees around us, to help make our surroundings, in some measure, comparable to the fair garden of the Lord that flourished for a time in the dewy morning of the world.

* * *

But interest centres in the three important gardens specifically mentioned in the Scriptures.

The first, green and flourishing, fresh from the hands of the maker of all good things, the "Garden of God," has already been noticed.

* * *

In the New Testament we read that "over the brook Cedron there was a garden."

A layman may speak of the material side of Gethsemane without sacrilege, and it is of special interest in connection with this subject because of its secluded situation on the Mount of Olives, separated from the city by a valley and a brook."

The chief end of a Park or a garden is to secure restful quiet for man—a place where human beings may resort for meditation, and under the soothing influence of kindly nature straighten the tangled web of life and return refreshed to its routine.

That the Son of God sought consolation for human suffering in such a retreat should have influence with the sons of men.

The last of the trio of Bible gardens is also mentioned in the New Testament, where it is recorded, "Now in the place where he was crucified there was a garden; and in the garden a new sepulchre, wherein was never man yet laid."

I believe that authorities agree in locating this tomb in a situation where, at that time, trees grew, and it naturally follows that it contained other vegetation, so it was not a misnomer to call the place a garden. It is significant that the body of Christ was not consigned to a public burial place, but to the "tomb of a rich man."

This is of peculiar interest to the people of our day, for it proves conclusively that even then all who could afford the luxury of burial in a garden preferred it to interment in a stone yard. Indeed, it may well be assumed that this fact is the germ of the modern cemetery movement. This modern idea is already in practice in the largest, wealthiest, and only artistic cemeteries of the United States, and is to the end of securing burial for all—rich and poor alike—in beautiful parks that are to be religiously cared for as such as long as the present civilization endures. That is, in cemeteries where the best obtainable talent has so grouped the trees and shrubs that a park-like effect is gained; where conspicuous monuments are very few and most carefully located; where head stones are substantial, but low and inconspicuous, so that they do not mar the landscape and give the idea of a stone yard; where foot stones, copings, curbings, railings, hedges, and lot boundaries of every kind are excluded; where the grade of the entire enclosure is permanently fixed, and where all graves are level with the surface, so that nothing interferes with the continuity of the ground, nor the easy care of the entire broad expanse of turf; where, in short, the trees, shrubs, green sward and monuments together form a peaceful picture of repose.

* * *

The conclusions drawn from the Bible lessons under consideration are: that it was the divine intention that good people should live in gardens, and that banishment from such delights was the first punishment inflicted on the human race; that gardens were intended for the physical, mental and spiritual regeneration of men, and that it is meet for human dust to rest in gardens. For all this there is ample precedent and example. And to add the last touch of grace to these Bible object-lessons, and give the idea wings to carry it above earthly dust and ashes, it may be said a garden is still the synonym of Paradise. *Fanny Copley Seavey.*

NOTE.—This paper also included the Hanging Gardens of Babylon but as these ancient gardens have been often referred to and described, this part is omitted. Mrs. Seavey calls her paper an example of amateur Home Missionary work.—ED.

HARLEIGH CEMETERY, CAMDEN, N. J.

The work of improvement of our large cemeteries is a matter requiring constant attention and a continual outlay, but it is nevertheless a work of constantly increasing interest. No matter to what extent, under modern ideas, a cemetery may have been developed, there is always work to be done in putting on the finishing touches to the completed portions, finishing the sections temporarily improved for burial purposes, or constructing memorial and permanent buildings which conditions have determined are necessary for the appearance or well being of the property.

The transformation scenes constantly being set

\$2,500 has been expended here. The addition of the lake, while removing a sore spot in the general effect, has added the air of tranquility and repose which the presence of a placid sheet of water imparts. When the bareness wears off, and the shrubs and trees make their presence felt in the picture another charm will be added to the scenery.

One of the latest additions to Harleigh is the Sumner Vault, constructed in a most substantial manner, and located in a side hill. Every attention has been paid in its design and erection to permanence, so as to reduce to a minimum the liability of future repairs. A figure to surmount the entrance is now being cut in Italy. The cost of the struct-



RIDGE LAWN TERRACE AND SWAN LAKE.—NEW WORK.

in our larger cemeteries makes their progressive development of increasing interest, and gives to illustrations of such work a broader instructive value.

Harleigh cemetery, Camden, N. J., one of the representative cemeteries of modern practice in the east, has carried out during the last year or two a large amount of such work, and the illustrations given herewith are taken in the locality of the improvements.

The views of "Ridge Lawn Terrace and Swan Lake" and "Approach to Summit Lawn" show the main changes in the landscape.

The lake originally was what is commonly called a "frog hollow," and the operations have really reconstructed the surface of the area improved; some

ure will when completed amount to about \$10,000.

The varied contour of surface comprised within the cemetery boundaries have made it possible to secure beautiful effects. Terrace and lawn, woodland and lakelet, all combine to make it a delightfully restful spot, alike full of suggestion and inspiration either to the mourner or disinterested visitor. That much discussed poet Walt Whitman chose it for his last resting place, and his massive tomb, set amid the rustling oak trees, forms a shrine which attracts many.

There are many handsome memorials scattered over its lawns, and shaded amid its shrubbery and trees, but after all the real beauty of this, as of all cemeteries, wherein the landscape gardener has had

PARK AND CEMETERY.

139



APPROACH TO SUMMIT LAWN.—NEW WORK.



RECEIVING AND PRIVATE VAULTS.

a chance to develop his best work, lies in the pictures which nature, assisted by man, offers on every hand, and which she varies in tone and color as she passes along in her days and seasons.

We are indebted to Mr. George E. Rhedemeyer, superintendent, who is carrying out these several improvements, for the illustrations herewith given.

FAMOUS MONUMENTS OF BERLIN.



MONUMENT TO QUEEN LOUISE.

tured memorials of them, though it must be admitted that a very few of the very finest monuments are of men whose pursuit in life was a peaceful one and whose laurels were not won on a field of gore. Of some of these latter I shall speak in another letter, such as the Goethe monument, undoubtedly one of the choicest masterpieces of German art.

One of the most original and effective of the former kind, however, is the national monument on the summit of the Kreuzberg, a hill in the southwestern part of Berlin affording, on a clear day, a splendid bird's eye view of the whole city. This was erected after a design by the famous Schinkel, in 1821, to commemorate the liberation of Germany from the yoke of Napoleon I. A Gothic, flute-like pillar rises 73 feet high, crowned on its apex by a tall gilt cross, while the pillar itself is of cast iron. In 1878 the whole monument was raised, by means of hydraulic presses, some 27 feet, and a redoubt-like substructure built of solid masonry, having a diameter of 75 feet and surrounded by iron railings. It is from the wide platform thus created that a circular view in every direction can be had of the city lying at one's feet. The monument itself is surmounted by 12 statues in niches, of which six represent the directing genius of one of the leading battles during 1813-15, after models by Rauch, Tieck and Wiedmann.

It is in consonance with Prussia's warlike character and with the large number of battles fought by its people that about one-half the monuments and statues to be seen in Berlin were erected in honor of great warriors or of great rulers or events in its history. The poets, the artists, the men of science occupy but a secondary place in Prussian annals, and so it is in the matter of sculp-

Not nearly so popular with the Berlin folks—who are of a somewhat democratic, turbulent spirit—is the monument in Invalid Park, though that, too, is fine, artistically considered. It was erected after Brunckow's design, in 1854, in memory of the 475 Prussian soldiers who fell fighting the revolution of 1848-49 in the streets of Berlin. It is a cast-iron column 107 feet high, crowned by an eagle with outspread wings. The pedestal below is 36 feet wide, and it shows a well executed medallion portrait of Frederick William IV, during whose reign the throne was shaken by that very revolution. Underneath the eagle is a gallery, to which 199 steps lead inside the column, and from which a fine view is obtained.

The so-called Friedenssäule or "Peace Column" standing in the centre of Belle Alliance Place looks much like the Nelson Column on Trafalgar Square, London, and lends a very picturesque air to the whole fine place in the very heart of Berlin. It was erected by von Lauteau as a memento of the 25 years of undisturbed peace Prussia and Europe had enjoyed from 1815-40, and Frederick William III laid the foundation stone himself in that year, it being finished in 1843. A slender pillar of granite, resting on a socle of gray Silesian marble is crowned by a Victoria by Rauch. The socle is surrounded by a basin into which carved lions of stone squirt streams of pellucid water. The whole monument has an altitude of 66 feet. Grouped around it are marble statues, symbolically representing the four nations taking part in the battle of Belle Alliance, 1815, England and Holland being after models by Fischer, and Prussia and Hanover by Franz. On the side of the broad stairs "Peace" by Albert Wolff, and "History" by Hayer, and on the superstructure of the gate the "Four Seasons" by Drake and Pohlmann.



THE BRANDENBURG GATE.

The far-famed Brandenburg gate deserves a place here, too. It looks from the Pariser Place onto that square garden adjoining the Thiergarten, and it was constructed from 1789-93 by Langhaus after the model of the Propylæ on the Acropolis of Athens. The height of the gate is 65 feet, its width 192. Of the five openings in it the middle one is intended solely for the use of the court. The material used is gray sandstone. On both sides of the gate, and connected with it by colonnades, are structures similar in style and material to the gate itself. The six columns of the gate are simply crenelated, and the capitals are not ornate, but there are fine sculptural effects on the architraves, and an immense tablet below the quadriga on which scenes of war of ancient Greek life have been carved with great skill. The Victoria on the quadriga, modelled by Schadow and executed in copper by Jury, is a wonderfully perfect specimen of modern art. As such, it excited the cupidity of Napoleon I, who sent it to Paris in 1807, whence it was brought back by Blücher in 1814, after the storming of Paris.

The most warlike and famous of Prussian monarchs, Frederick the Great, is also honored by a fine monument, Unter den Linden, fronting small palace where late Emperor, William I, preferred living during his reign. It is the great masterpiece by Rauch,



THE SCHLOSSBRUNNEN.

cast in bronze by Friebel, and was dedicated in 1851. On it are represented the leading men of war and of peace that distinguished the brilliant reign of Frederick the Great during 1740-86. Fittingly the great ruler himself occupies the most conspicuous place on the summit, and his is as good and faithful a portrait as are those of all the other men below him. Even the horse is a faithful reproduction of his favorite charger during the Seven Years' War. The equestrian figures at the four corners of the pedestal are his best generals, viz., Prince Henry, the king's brother; Duke Ferdinand of Brunswick; Zieter and Seydlitz. The total height of the monument is 43 feet, of which the equestrian statue of the king on the top measures 17½ feet, while the figures below are life-size.

The one monument, however, which is popular in the best sense of the word, is that of Queen Louise in the Thiergarten. She was the most beloved queen that Prussia ever had, and that her memory is as green to-day as ever is shown by the fact that every early spring, on her birthday, the lovely spot in the midst of the large park where her marble effigy rears itself under the shadow of tall elms, is smothered in floral tributes offered by high and low. The monument is executed in the finest Carrara marble by Erdmann Eucke, and was unveiled on her birthday, May 10, 1880. The queen is represented in a graceful, yet perfectly natural matronly pose, with one hand hanging by her side, the other holding the end of her customary gauze veil. The frieze around the pedestal shows domestic and warlike scenes from her life.

W. v. Schierbrand.



MONUMENT TO FREDERICK THE GREAT.

The Horticultural society of Shropshire, England, proposes to erect a statue to Darwin at his birthplace, Shrewsbury. It will cost \$6,000.

PARK AND CEMETERY.

CHRIST CHURCH, GRAVEYARD, ALEXANDRIA, VA.

Among the many interesting sights to curiosity seekers around Washington are the numerous cemeteries, some of them in quite prominent locations; some in out of the way and forgotten nooks and corners; some rendered beautiful by artists in landscape and marble; some beautiful by nature; in any and all of these cemeteries can be found quaint and curious old legends, records of departed greatness placed on marble and stone where not even the ravages of storm and time for more than a hundred years has been able to obliterate these records.

In connection with many of these graveyards are often found old churches equally as remarkable.

In the center of the old-fashioned town of Alexandria, Va., distant from Washington about eight miles is Christ Episcopal Church. This is rendered by association equally dear to north and south alike. Within its shades and shadows no spirit of discussion should ever be allowed to rest when Washington and Lee both claimed it as their place of worship.

The church is a large square structure facing due east and west, built of brick, that is supposed to have been imported from England, for the reason that no clay similar to it has ever been found in America, but there is no authentic information on this point. The erection was begun in 1767, under the supervision of an architect by the name of James Wren, said to be a descendent of the Sir Christopher Wren, the architect of St. Paul's, London, England. It was taken in charge first by a contractor, James Parsons, and later by Col. John Carlyle by whom it was completed on Feb. 27, 1773.

When completed 10 pews were sold by auction, of which General Washington purchased one at £36.10s or about \$187.36—the highest price paid for any.

Both interior and exterior are in an excellent state of preservation. The interior finish is white and gold. The gallery is supported by eleven columns, four on each side and three across the end. The pulpit is about 15 years old but is an exact reproduction of the original one; and is in the rear of the chancel rail. The original chairs and communion table of black walnut are still in use. On either side of the chancel are two white marble shields, one in memory of Gen. Robt. E. Lee and the other of Gen. Geo. Washington. The large seat in the "Amen" corner is at present occupied by Mr. Lawrence Washington, a great grandson of George Washington and a vestryman of the church.

On the doors are old English locks, put on left handed and upside down.

The pews that were occupied by both Washington and Lee are each designated by silver plates on

the arm of the seat with their respective autographs.

Going into the graveyard one can see many old and curious inscriptions with reference to the virtues of the departed.

The two tombstones that are decipherable and are the oldest are dated 1771 and 1775; and are of a dark blue stone with curious old-fashioned carvings. On the one dated 1775 is the following inscription:

Behold Fond Man.
See here thy Pictur'd Life
Pass some few years the flowry Spring
Thy sober Autumn fading into age
And pale concluding winter comes at last
And Shutts the Scene.

Under date of 1800, on a weather beaten gray granite slab appears the following:

In Memory of
Dorothy Harper, uxor
of
John W. Harper,
departed this life
Sept. 3rd 1800
after and in dis posion
of 3 years and 5 months
aged 42 years 8 months.

Under date of 1799 is this odd rhyme:

All you that cum to my grave to see,
Prepare yourselves to follow me,
Repent and turn to God in time
You may be taken in your prime.

Another odd inscription under date 1803:

"Make the extended skies your tomb
Let stars record your worth;
Yet know vain mortals all must die
As nature's sickliest birth.
In thy fair book of life divine
My God inscribe my name,
There let it fill some humble place
Beneath the slaughter'd lamb.

One of the most notable graves in this yard is that dated 1808 of Mrs. Warren, the wife of William Warren an actor of note in the old colonial days. The remains are enclosed in a gray marble sarcophagus and make mention of her many virtues and the loss sustained by the American stage through her death. She has now a representative in the profession she loved so well in the person of the Boston comedian of that name who is her grandson.

Under date 1799 is a well preserved stone bearing this inscription.

Weep not for me my
parents Dear I am not
Dead but sleeping here
As I am you all must be
prepare yourselves
To follow me.

A FOLIAGE BED AT WEINBURG, SWITZERLAND.

The Royal Park at Weinburg near Rheineck, Switzerland, usually receives its royal guests in the autumn, and in consequence every effort is made to control the garden effects so as to have them at their best in the fall.

The foliage plants of the group shown on the accompanying engraving are grown in cold beds and are given plenty of water and liquid fertilizer. They grow very slowly during the summer and are just about fully developed in the beginning of fall. Although these plants are not given any particularly



special care, or set out in warm locations or greenhouses, like most other plants of their class, the groups in the park at Weinburg when fully grown attain a good height. *Musa Ensete* is grown in a temperature of from 50 to 60 degrees Fahr., during the winters. The larger plants are about twenty-three, and the smaller ones from ten to sixteen feet in height. The group illustrated contains *Musa Ensete*, *Arundo Donax*, *Canna Ehmanni*, several kinds of *Ricinus*, *Solanum Marginatum* and *Caladiums*.

The group is irregular in form, and the plants are also set in an irregular way so as to obviate a stiff appearance, and produce a more artistic effect. Translated from *Moller's Deutscher Gartner-Zeitung*, Erfurt.

SOME HANDSOME MICHIGAN ANNUALS.

COREOPSIS TRICHOSPERMA TENNILOBA, *Golden Glory Coreopsis*. This is positively the most brilliant and showy annual found in Michigan. In habit it reminds one of a *Cosmos*, but more branching, and more floriferous, being covered in September with brilliant

golden yellow flower-heads $1\frac{1}{2}$ inches wide, open in the sunlight, but closed at night or when it rains, almost as pretty when closed as when wide open. Leaves deep green, finely divided; also very pretty. The height of the plant varies according to the moisture and richness of the soil, ranging from three to seven feet in height. This brilliant and beautiful annual is very abundant in Oakland and Lapeer Counties, southeast Michigan, often covering great swamps, these swamps in September being a brilliant mass of golden yellow, presenting by far the most conspicuous and brilliantly showy portions of the landscape, visible at a long distance. The seeds germinate in stagnate water or in moist or dryer soil early in May, the plants becoming large by August or September. The writer has tested it, taking plants directly from a swamp and planting them in a dry sandy flower garden in the full sunshine, and found this showy flower a success anywhere in the flower garden, and excellent for cut flowers.

The great brilliancy and beauty of the swamps covered with this plant establishes the fact that few plants can excel it for planting in masses, particularly in moist locations, though it will succeed well in most soils and locations where there is sufficient sunlight. But it will flourish wherever a Marigold would.

CHENOPODIUM CAPILATUM, *Strawberry Blite*. Plants and flowers not pretty, but the long clusters of scarlet strawberry-like fruit are very ornamental. Easily grown.

GENTIANA CRINITA, *Large Fringed Gentian*. Another glory of our autumn landscape, one of the handsomest of our American wild flowers. Plant very branching, one to two feet high, with large bell-shaped, beautifully fringed rich purplish blue flowers. From August to October 1 or thereabouts.

GENTIANA SERATA (*G. CRETOUSA*), *Smaller Fringed Gentian*. Flowers nearly as large, quite as handsome, less fringed and blue. Quite different in appearance.

COLLINSIA Verna, *Innocence*. A beautiful little wild flower. Only about six inches high, with handsome blue and white flowers. A bed of this is truly beautiful.

IMPATIENS FULVA, *Tawny Jewel Weed, Touch-Me-Not*. A relative of the balsam, three feet high, branching with orange-red spotted flowers in August. Pretty. Rich, moist woods. Masses.

IMPATIENS PALLIDA, *Pale Jewel Weed*. Taller, less branching. Flowers equally as odd in form, bright yellow, about one inch long. Both are pretty and have pretty foliage. Called "Touch-me-not," because the pods when ripe burst at the slightest touch.

GERARDIA PURPUREA, *Purple Gerardia*. This is a very pretty branching plant, one foot high, with very pretty odd purple flowers in August or September. Grows in wet places, clay or limy soils. Think it difficult to transplant. It would be better to sow seeds of this and the next in the fall in places suitable for their growth.

GERARDIA TENUIFOLIA, *Slender Gerardia*. Much more delicate. Very pretty purple or white flowers. Grows in dry, sandy places, particularly hillsides and banks, more or less shady. One foot high, branching.

Rochester, Mich.

Wilfred A. Brotherton.

NOTES.

At the national convention of nurserymen recently held in St. Louis it was predicted that, "if the present rate of destruction continues for the next twenty-five years the United States will be practically bereft of forests."

* * *

The Legislature of Iowa has, by formal Act of the Assembly, adopted the Prairie Rose as the State flower. In former times, the rose was the emblem of rival factions in civil war. Let us hope the present selection will signify peace and good will.

Mr. Francis Darwin contends that the teaching of our text books, in regard to the method by which Nature causes water to ascend in trees, is baseless. No theory that can command general approval has been offered so far. Plants draw water from dry ground at times.

Dr. Tyson, Philadelphia, calls attention to the painful sight of fine street trees in that city being decapitated by the ignorant tree butchers, who make a living by this execrable work during the winter. The trees are reduced to trunks with a few score of huge stumps several feet long in the place where the former beautiful branches grew. Much of the trouble comes from the ignorance of the original planter in selecting unfit trees. The Silver Maple and Canadian Poplar (mislabelled Carolina Poplar) are utterly unfitted for street trees. They grow rapidly, and are for this reason very useful for ten or fifteen years. But they grow too tall soon after, and the owner easily falls into the views of the tree butcher to give him a job beheading them.

Unlike many herbaceous plants, undisturbed paeonies improve with age. In older gardens immense bunches are frequently seen, a mass of foliage and liberally dotted with huge heads of flowers. Notwithstanding the pleasure afforded by large clumps, it may occasionally be found desirable to transplant and divide them. While it can be done in perfect safety to the plants either in fall or spring, the former is preferable by causing less disturbances to spring growth. It has been found advantageous to divide them as early as possible, it being merely necessary that the growth should have accomplished its purpose for that season, at which time it is really waiting for destructive frost to do what we will in this case do—cut it off. To divide them, use a heavy knife or cleaver, leaving "eyes" to each division. In the vicinity of Philadelphia this work, may be usually performed in early September. They will thrive in almost any ordinary garden soil, yet to have them at their best, plant them in a rich loam, low enough to receive full benefit of rains. A liberal top-dressing of manure from which the straw has not been closely shaken, placed in the fall, gives food for strong growth besides retaining moisture

and keeping the roots cool during the summer—a very delight to a paeony.—*Meehan's Monthly for August.*

* * *

Orchid collectors and growers are well aware that amid all the varied shades and colorings which adorn these lovely flowers blue has hitherto been conspicuous by its absence. The London *Daily News* says that Mons. C. Roevelen, well known as an intrepid and reliable collector, in April last, in an almost inaccessible spot in the Philippine Islands, chanced upon a group of orchids bearing rich blue flowers. The discoverer, considering this new flower worthy to commemorate "the longest reign," has christened it "Dendrobium Victoria Regina," and forwarded a collection to England, where they arrived a week before the diamond jubilee, in June last.

* * *

The largest marine plant, and probably one of the highest plants known on this globe, is a gigantic seaweed, the nereocystis, the stem of which has been found to grow as much as 300 feet long. It was first discovered not far from the Alaskan coast, but has since been found floating in various parts of the Pacific Ocean along the American and Asiatic shores. This seaweed grows in a very curious manner. Large quantities of it are found at a little distance from shore, and at depths not exceeding 300 feet. On loamy bottom large thickets of this plant take root, and a stem of the thickness of ordinary cord grows upward. At its top there is a pear-shaped balloon, which grows with the stem, and when it reaches the surface of the water it often measures 6 feet and more in length, with a diameter of 4 feet 6 inches. This balloon has, of course, an upward tendency, and keeps the stem growing until it floats on the surface of the water. From the top of this balloon a large tuft of strong, thick, spade-like leaves grow out, which originally are not more than two feet long, and which grow and split until from the balloon a rose-like growth of from fifty to sixty feet in diameter covers the water. The gigantic weed grows in such quantities that near the shore large meadow-like islands are formed, which impede navigation. The natives of the Aleutian Islands make manifold usage of this plant. From their strong, dried stems they make ropes 250 feet and more long, while balloons of this weed furnish them with large vessels after they are dried, the smaller ones being used in their boats to bail out water. The long leaves, after being dried, are cut into narrow strips and used for wickerwork, the making of baskets and similar furniture.—*St. Louis Globe-Democrat.*

* * *

The citizens of Dijon, France, recently voted a sum of money for putting a railing around a tree standing within the city limits. The tree bears a label which informs the sightseer that it is the oldest poplar in France. The Town Council has a record tracing the history of the tree since the year 722 A. D. It is 122 feet in height and 45 feet in circumference at the base.

CEMETERY TOPICS.

The growth of healthy sentiment on the propriety and necessity of adopting modern ideas in regard to cemetery management is well attested by the readjustment of the old laws and the incorporation of new ones, as is observed in so much of the cemetery literature now issued. In fact, in many cases special issues of revised rules and regulations come to hand, so that lot owners may have opportunity to study the changes and fall into line to co-operate in renewed activity to better things. The following extracts will allow of a comparison with the old ideas, and will also suggest the importance now attached to cemetery affairs:

An entire reconstruction of the public grounds has been accomplished this year by the board. The unsightly mounds have been leveled, the sections raised to grade, and numbered markers placed to more than 3,000 graves, with the record and plans placed on file at the office of the board. These grounds have been thoroughly *dressed* and seeded, and will hereafter present a beautiful lawn appearance instead of a barren and apparently forgotten portion of the cemeteries.

A very large number of old lots and graves, many of which have been sadly neglected during the preceding years, have been cared for during the past season. A reviving interest on the part of proprietors and heirs to lots has developed, and a seeming desire to co-operate with the board in its efforts to improve and beautify the grounds.

* * *

Much credit is due the superintendent for this condition of affairs, as he has by personal effort and solicitation induced many proprietors to perform what would appear to be a duty which is too often forgotten.

* * *

The pond, which has for a long period been but a stagnant pool, has been much improved by connecting the drainage with the Bibbitt street sewer, and the outlet so adjusted as to hold the water to required depths. It is now a beautiful reservoir of water, abounding with thousands of gold fish, and the beautiful pink lilies planted within it by the former superintendent, E. S. Haskell, makes it one of the greatest attractions in Rural Cemetery.—*Second Annual Report of the Cemetery Board, New Bedford, Mass.*

* * *

The By-laws, Rules, Regulations, etc., of the Bellefontaine Cemetery, St. Louis, Mo., have been reissued, with corrections made to date of July 1, 1897, and the following extracts therefrom cover considerable ground, and show a radical advance:

* * *

Stone copings to lots, fences and hedges are prohibited.

* * *

Class distinctions in public lots are abolished, and the price of single graves in them is fixed at \$30 each.

* * *

Joint ownership in lots of 400 square feet, or less, not permitted.

* * *

Any fence, inclosure, entrance, entrance post, coping or curb which may be, or hereafter become, dilapidated and unsightly may be caused to be removed by the Board of Trustees at the expense of the association.

* * *

No entrance or entrance post may be placed upon any lot,

and no steps, except where required by the grade of said lot.

* * *

No more than one monument or mausoleum may be placed upon any one lot, and no headstone upon any lot shall be higher than ten inches above the ground, except by special permission of the association.

* * *

On the decease of any owner or part owner of a lot in the cemetery the heirs or devisees of such decedent must file in the office of the association full proof of their heirship or proprietorship, for the purpose of being duly recorded in the books of the association. Without such proof and record the right to the lot cannot be recognized by the association or its officers.

* * *

In the matter of permits for interments in private lots the rule requiring owners to sign such permits will be enforced in all cases.

Producing a deed will not be considered any authority for opening a grave in a private lot. Persons obtaining permits for interments in private lots will be held responsible for all expenses for disinterments in case such permits, for any cause, were erroneously issued. With the lapse of years some lots are held by the great-grandchildren of the original owners, and heirs are so singularly negligent in notifying the association of their rights of inheritance that in some cases, especially where names are changed by marriage, permits may be refused to persons who can rightfully demand them. As this is a matter of importance to lot owners, their attention is called to the rule concerning "Decease of Owners," (given above).

* * *

No graves will be dug on Sunday. No orders for Sunday funerals will be issued after 12 o'clock noon on Saturday.

* * *

The following extracts from the Rules and Regulations of Riverside Cemetery, Marshalltown, Iowa, suggests pointedly the advisability of making every effort to both interest and educate lot owners and citizens, and nothing is more stimulating in this regard than well-gotten-up reports, illustrated and otherwise attractive. More positive attention is paid to such productions, and they are not usually so carelessly set aside:

Much credit is due the ladies of the Ladies' Cemetery Aid Society, who have spent several thousand dollars for improvements at Riverside. Also the B. B. C. Society of young ladies, auxiliary to the Cemetery Aid, who spent over one thousand dollars in beautifying the cemetery. Heretofore no provision has been made for perpetual care of the lots, but this omission is supplied, as will be seen by the rules just established. Riverside is conducted on the lawn plan, and admirably situated and adapted for cemetery purposes.

* * *

The bottom or lower base of all monumental or other superstructure work must be squared sufficiently to allow it to rest on the foundation in its proper position, as no wedging or underpinning will be allowed. All monumental bases must be set in a bed of cement mortar, evenly covering foundation.

* * *

Gravemarks or headstones in all parts of the cemetery which are less than six inches in thickness shall not exceed six inches in height above surface of ground, and must not be

PARK AND CEMETERY.

less than eighteen inches in length and two inches in thickness; inscriptions must be on the top.

* * *

No gravestone or mark can be set in a socket or with a dowel. Granite is recommended as the best and most durable material for grave marks and monuments. Limestone, sandstone and soapstone are considered unfit for such purpose and will not be permitted.

* * *

Soliciting work in the cemetery, placing business cards on lots, or having name of contractors on monumental work which was erected by them, is strictly prohibited.

* * *

The Lake View Cemetery Association, Bridgeport, Conn., includes in its pamphlet a very comprehensive price list for the various kinds of work required in a cemetery. This is a good feature, which should be more general. The following extract concerning graves and lot inclosures carries with it no chance of equivocation:

All lot inclosures of any kind whatever are prohibited. No foot stones allowed, no fence, hedge, railing or coping will be allowed. No corner stone or post will be allowed in the future, except those which the association will provide. All graves will be turfed level with the ground where there are headstones or markers unless otherwise ordered.

SOME COMMERCIAL WOODS OF AUSTRALIA.

Foremost among the natural products of Western Australia is timber, which is fast becoming a source of great wealth to the colony. It is estimated that the forests of karri and jarrah are practically inexhaustible, and J. Ednie Brown, the Conservator of Forests, fixes the marketable value of the timber now matured in Western Australia, after a liberal deduction of one-third for waste in sawing, at the magnificent total of \$620,000,000. In other words, the forest resources of Western Australia cover the present public indebtedness, as well as the present sum of \$35,000,000 about to be raised by the colony for public purposes, more than eleven times over. Practically, all the timber is located in the southwest division of the colony, and is in most cases comparatively close to ports of shipment. The karri tree is the giant tree of Western Australia. An average tree may be reckoned at 200 feet in height and four feet in diameter at three to four feet from the ground, and about one hundred and fifty feet to the first branch. Trees of this size, according to the *Sketch* of London, are generally sound in every respect, and may be expected to turn out timber free from dry rot, gum veins, etc., to which large trees are usually subject.

The king karri has attained the height of 300 feet, and 180 feet to the first limb, with a circumference of twenty and thirty feet at the base. One tree has yielded nearly six thousand cubic feet of timber; karri is harder and heavier than jarrah, and, therefore, for a certain class of work, is more durable and is to be preferred. Jarrah, on the other hand, is especially suitable for submarine structures, such as jetties and wharves, as it re-

sists the ravages of the teredo nevalis, or sea worm. For railway ties, the upper parts of bridges, and especially roadmaking—for which last purpose it is now being extensively employed in London and other cities—karri is invaluable.

The various timber stations of Messrs. C. and E. Millar have their own lines of railway, and the industry is being developed in a very enterprising manner. It is, however, still capable of considerable extension, and no doubt as the merits of the two principal hardwoods of the colony become known they will be very generally utilized. At the present time there are no less than two thousand men employed in connection with the various sawmills in Western Australia, and with their wives and families there are something like five thousand souls in the colony connected with or depending upon the lumber industry. It is estimated that the capital represented in the colony by the various sawmills, their railways, tramways, jetties, locomotive engines, trucks, wagons, live stock and buildings is not far short of \$5,000,000.

With especial regard to the use of karri and jarrah for road paving purposes it is interesting to learn that these colonial hardwoods are now largely superseding such materials as asphalt and softwood. Mr. C. Gibson Millar, one of the principal forest-owners in Western Australia, is now in London, and that gentleman has recently stated that it is quite impossible at the present time for his sawmills of Western Australia to keep pace with the current demands. His mills, which turn out something like 40,000 loads of karri, not to mention jarrah, per annum, are working day and night, and the machinery is being duplicated with the least possible delay. Meanwhile orders are arriving for the timber from several of the London vestries, as well as from Paris, New York and other parts of the world. The special qualities of karri and jarrah which recommend them for road paving are their remarkable toughness and durability, and in the opinion of authorities they are much to be preferred to softwood or pine on sanitary grounds, being also non-absorbent.

But not only are karri and jarrah most useful timbers for street paving. Experience goes to show that they are quite invaluable for railway construction and equipment. They are practically imperishable, and will neither rot in the ground nor yield to the ravages of the white ant and other destructive insects. Owing to these qualities it is not necessary to creosote karri or jarrah sleepers, and the chairs for the rails do not require so broad a base as in the case of softwood sleepers. For bridge planking, shafts, spokes, felloes and large planking of any sort, general wagon work and beams there are few timbers which equal the Western Australian karri and jarrah.

Among the authorities who have reported with great favor on the usefulness of karri are M. A. Petsche, Municipal Engineer of the City of Paris, and most of the leading engineers and surveyors of the London vestries. M. Petsche places it next to tiek and liem in the matters of density and durability, while for economy and ease in working he prefers it to either.—*Exchange*.

* PARK NOTES. *

A special commission, created for that purpose, has planted and nourished more than 1,000 shade trees in the streets of Charleston, S. C., within the past four years.

* * *

J. Howard Nichols of Boston, treasurer of the Dwight manufacturing company, proposes to present Kingston, N. H., with a \$10,000 library as a memorial of his father and mother.

* * *

The City of Los Gatos, Cal., recently dedicated what its people call Bunker Hill Park. Soil from the historic hill at Boston was scattered in the air at the dedication ceremony.

* * *

Traugott Schmidt, recently deceased, left \$10,000 to be expended in Belle Isle Park, Detroit, Mich., either in the erection of a monument or in some other way as may be agreed upon.

* * *

In memory of his son, Mr. Spalding, a wealthy lumberman of Chicago, has given \$20,000 for a historical and free library building at Athens, Pa., his native town. The corner stone was laid on August 11th by the Grand Lodge of Masons with imposing ceremonies, several prominent personages being present.

* * *

A laudable example has been set by the employees of the D. C. Cook Publishing Co., at Elgin, Ill., who undertook to provide a fountain to embellish Lord's park of that city. The park itself was the gift of Mr. and Mrs. G. P. Lord. The occasion of the presentation of the fountain to the park commissioners was attended with many pleasant features.

* * *

Canton, O., is working upon the addition of another park to its recreative features. It already possesses Nimissilla park at the east end, and Water Works park on the west side. The new tract on the south known as Meyer's woods is very eligible property for park purposes, comprising 30 acres of hill and dale, well wooded, with a natural creek flowing through it.

* * *

The Park Commissioners of Peoria, Ill., recently decided to expend an annual sum of \$10,000 on Laura Bradley Park, provided Mrs. Bradley will vacate a lease now held by her for pasture privileges on a certain part of the park. Mrs. Bradley has promised to comply. An appropriation of \$87,000 is asked for park purposes for the fiscal year ending May 31st, 1898.

* * *

The State flower of Minnesota is the moccasin flower. The favorite of New Jersey is the white clover. The golden rod is the favorite in Alabama; the magnolia in Georgia and the peach blossom in Delaware. Two New England States only have expressed a preference for any flower: Vermont for the red clover, by act of the Legislature, and Rhode Island by vote of its school children, for the violet.

* * *

John Jacob Astor has made a grand investment for his future good name in providing the means for the purchase of James Russell Lowell's Cambridge home, Elmwood, for the purpose of a memorial park. The amount was \$18,000. Mr. Astor is said to have learned of the effort to purchase Elmwood while he was cruising in New England waters and as he was always a keen admirer of Lowell, the impulse followed. Elmwood will accordingly be thrown open to the public in Boston.

* * *

During the month of June there were 12,837 visitors to the top of the Washington monument at Washington, D. C., of

whom 10,130 made the ascent in the elevator, and 2,707 by the stairway, making 1,409,822 persons who have visited the top since the shaft was opened to the public Oct. 9, 1888. Two acts of vandalism were recently committed at the monument by unknown persons, resulting in the defacement of two tablets in the interior.

* * *

The State of Michigan having found itself unable to properly take care of the island of Mackinac and maintain it as a public park, steps are being taken to return it to the general government. Under the circumstances this is perhaps the best course. The natural beauty of the place and its rich historical associations, have made it a very popular resort, and visitors reach it from all parts of the country. It is meet that the government should enact laws to preserve it and maintain it in beauty and security for all time. No place in the country so lends itself to the purpose of an instructive beauty spot, and its limited area and modest financial requirements should ensure immediate action.

* * *

On July 10th the Board of Park Commissioners of Hartford, Conn., formally received from the executors of the will of the late Charles M. Pond the property left by him for public uses by the city. Mr. Pond died in 1894 and the executors have just completed their duties. The gift to the city comprises the homestead, ninety acres of land of the conservative value of \$100,000 and half of the residue of his estate approximating \$180,000, for the purpose of improving and fitting the premises to accomplish the object of the gifts and for the purchase of additional land for the same purpose. The donor expressed a wish that in some way the name of his wife might be associated with the property, and in consonance therewith the park was formally named Elizabeth Park. The munificence of the gift and the liberal ideas expressed by the donor will keep his memory affectionately in honor.

* * *

Wisconsin is setting a splendid example in the direction of endeavor to make good the depredations of the lumberman. Much of the northern part of the state has been reduced to barrenness and the C. & N. W., C. M. & St. P. and the W. C. railroads are joining hands with the State Forestry Commission with a view to retimbering the denuded sections. So much interest has been worked up that some of the prominent owners of pine lands will co-operate. The railroads have been giving much attention to the subject, carrying out their investigations in a thoroughly scientific way. The deterioration of the lumber business has also suggested the necessity of rehabilitating business resources, with the result that industrial schemes have been seriously studied, and the problem of encouraging the establishment of large industries where raw material as well as facilities are most available is being worked out.

* * *

In appointing October 29th as Arbor Day for the State of Indiana, Governor Mount included the following in his proclamation message: "It seems eminently wise and proper that a day be designated which the people of our commonwealth should be urged to observe by the planting of trees, vines and flowers. Homes should be made more attractive through the beauty of these natural adornments, to which is added the pleasure of refreshing shade. Fruit trees and vines should be cultivated, both for their beauty and their fruit. Towns and cities should lay the foundation of future beauty and attractiveness through the location of parks and the planting of trees, shrubs and vines. The children of the public schools, by appropriate exercises, should observe the day in thus beautifying school grounds. Many barren spots in the country may be made attractive and the basis of future profit by putting into effect practical examples of this honored custom."

CEMETERY NOTES.

The President of the Missouri Crematory Association, in a recent report makes a very good showing for the past twelve months. There were 106 cremations as against 85 in the previous year, there having been a large increase in business, of these 34 were natives of the United States, 59 of Germany, and the balance of other nationalities.

The Cemetery Board of New Bedford, Mass., has recently received a unique historical memorial in the shape of a gavel made from a piece of the keel of the old U. S. frigate Constitution. It was sent to the board by Mr. H. E. Rulow, of Philadelphia, in acknowledgement of courtesies extended in connection with the death of his brother. The gift was accepted and acknowledged, and a silver plate will be inscribed with the data and affixed to the gavel.

A recent ordinance passed by the common council of the city of St. Paul, Minn., provides: "That the dead body of every human being that shall be interred in any grave in any cemetery in the city of St. Paul shall be placed in a substantial coffin or casket, wooden or other material, and shall be placed in such grave at least three feet below the surface of the earth." Defaulting this ordinance involves a fine of from \$20 to \$100, or imprisonment in St. Paul workhouse of from 15 to 90 days.

A disgraceful piece of work was recently perpetrated by possible grave robbers in St. Peters cemetery, Troy, N. Y. On his morning rounds Mr. John L. Sullivan, superintendent, noticed that the newly made grave of a Mrs. Schwartz had been opened. Closer investigation found the coffin on the edge of the opening with the lid of the polished oak box torn off, and the glass of the coffin shattered. The body had apparently been taken from the coffin, and afterwards crowded back. In their hurry the grave robbers tore most of the clothing from the corpse. Various conjectures were made as to the purpose of the desecration, and the matter at once given over to the police.

The Chinese residents of the United States have finally secured a site for a cemetery. It is located at Wynnewood, Lower Merion, Pa., and will cost \$350,000. It is on the main line of the Pennsylvania railroad, and is widely known as St. Mary's farm. It is triangular and contains 109 acres. The property will be held under a trust deed by an American citizen for the syndicate. In the northeast corner of the plot, a section of fifteen acres will be devoted to the building of a joss house, wherein the Mongolians will hold their religious ceremonies attending the burial of their dead, and their various festivals. There is only one other cemetery in the country devoted to the exclusive use of the Chinese, and that is on the Pacific coast.

The absolute aversion of the Mussulman and other Eastern religionists to conform to modern ideas is well illustrated in India, and is the cause of much difficulty with the English government officers to promote better conditions. Speaking of the recent terrible black plague in Bombay a writer in the Chicago *Tribune* said: "Day and night the acrid smoke from the burning ghats floated across the city. Their fires never went out, yet there were more corpses than could be burned, waiting their slow turn. The Mohammedan graveyards, too, were full. There are a couple of them, one on the Queen's road, one on the Grant road, both in the heart of the city. Some day they may be instrumental in bringing a renewal of the plague upon Bombay.

Even now the awakened municipality is trying to persuade the Mussulmans to bury their dead out of town. This request is met with stern refusal."

The twentieth annual meeting of the stockholders of Magnolia Cemetery, Charleston, S. C., was held June 10th. This cemetery which is approaching its half century mark has gone through many trying vicissitudes in its early days, not the least of which was its occupation by federal troops during the war. This involved a heavy loss to its owners and destruction to the cemetery. The devotion and energy of its officers have again brought it to the condition of one of the most beautiful in the south. President Geo. W. Williams in his report says: "I have made a careful estimate of the unsold lots in the cemetery and unless there is a large increase in the population of Charleston it will take thirty years to sell all the lots. The trustees' reserve fund, which is now \$36,850.05, will doubtless be sufficient when all the lots are sold to keep the grounds in order forever. The special Perpetual Care Fund, authorized by our State Legislature, is increasing each year; the interest derived from that trust will keep each lot put in perpetual care as long as there is a Magnolia cemetery. Our twenty-five hundred lot holders, with their ten thousand dead who sleep in the quiet and peaceful Magnolia, are interested in the perpetuity of the cemetery."

The convention of the Society of American Florists just adjourned at Providence, R. I., made Swan Point cemetery an object of special interest. Mr. W. H. Mason describing the cemetery in *The Florist's Exchange* says among other things: "The grounds contain about 230 acres, of which 5 acres are owned and controlled by the First Congregational Church, and have been in charge of Timothy McCarthy as superintendent since 1876. Of first importance no doubt are the fine macadamized driveways which traverse and intersect the grounds in all directions. Some of these are beyond comparison and must be seen to be appreciated. Within the grounds nurseries for hardy vines and shrubs have been started, and throughout the premises the use of deciduous and evergreen trees and vines have been largely encouraged and increased during the past few years. The north boundary of the cemetery has been defined by a rugged boulder wall that in its originality and novelty is striking and attractive. Along the border of its south face have been planted shrubs and vines which have overgrown the rocks until the latter are largely hidden. In one of its miniature lakes is the cascade, falling amid masses of foam and spray over a rocky declivity in the side of the huge boulders into the basin like pond beneath. In all these miniature lakes are propagated aquatic plants of varied families. Hours could be pleasantly and profitably employed here amid native shrubbery, trailing vines, flowering plants, stately trees and choice exotics, and so artistic and harmonious, yet withal diversified are those offered that one never tires in his wanderings and study."

The Daughters of the Revolution at Hartford, Conn., have undertaken a very interesting work in the line of restoring and preserving the tombstones and monuments of the old Centre Church cemetery of that city. This cemetery contains the remains of many noted persons of early colonial days, and the society has succeeded in working up an enthusiasm which promises to effect a thorough renovation of the old and sacred spot. It is said that this cemetery was the only one in Hartford between the years 1640 and 1840 and hence a historic halo encompasses it, which should invoke all the necessary zeal to perfect the work of restoration and improvement. Among the stones undergoing restoration are those of ev-Governor Leete; Colonel Nathan Payson, the famous scout who died in 1761; Joseph Colyour, died 1769; John Laurence who for twenty years was treas-

u
rer of the colony. He died in 1802. David Gardner of Gardner's island whose epitaph states that he was the first white child born in Connecticut. The date of birth is 1635, and his death occurred in 1689. He was the offspring of one of the families which migrated with the Hooker colony. John Poultry, who died in 1736, Gile Hamlin, William Pitkin and other original settlers. The oldest grave in the cemetery is believed to be that of Nathan Gilbert, who was buried in 1682, 215 years ago. The Caffall process, which was noticed in our last issue, is the method of restoration adopted. In the main this consists of carefully cleaning the stones and then applying a chemical solution which combining with any soluble lime near the surface hardens it and renders it insoluble. The stone is then heated by suitable apparatus to a temperature of some 200 degrees when melted paraffine is applied which fills up the pores to a required depth and practically water proofs them. Every trace of the paraffine on the exterior is afterwards removed by a patented process and the work is done. The monuments so far renovated have appealed so strongly to those interested that it is expected that two-thirds of the monuments will be thus restored.



CORRESPONDENCE.

LYNN, MASS., July 22, 1897.

Editor Park and Cemetery.

DEAR SIR: As the time draws nigh for our convention our thoughts naturally turn in that direction, and if we all do what we can it will be a grand success. In fact, all of our conventions have been successful. PARK AND CEMETERY has done much for our association, and it is our duty to reciprocate by writing for it, and surely there is plenty to write about, leaving no excuse on that score.

The excuse is that we think we are so busy; we put it off till next month, and when next month comes we do the same as before. "Let us try in the future and turn over a new leaf."

I have before spoken about bringing photographic views of our grounds to our convention, and it will bear repeating. We all remember what an interesting feature it was at our last meeting. Once more I want to say let us have a good attendance, and I am sure we all hope to see our only lady member present. Until then my best wishes are with you all.

William Stone.
Superintendent Pine Grove Cemetery.

LEGAL.

RIGHT OF ACCESS TO CEMETERY LOT.

The court of appeals of New York has rendered an important decision, in principle, in the case of Palmer v. Palmer, where it reverses the decision of the general term of the supreme court of that state. The purpose of this action was to establish the plaintiff's right to a way across the defendant's farm, from a certain street of the town of Mamaroneck, in Westchester county, to a private cemetery owned by her in the rear of the defendant's premises, and to enjoin him from interfering with the exercise of that right. The defendant and plaintiff were brother and sister. In the settlement of their father's estate, by the heirs, the farm mentioned was deeded to the defendant, and the cemetery lot to the plaintiff and her sister. After the deeds between the parties to that transaction were executed and delivered, the plaintiff and her sister had no interest in any land bordering upon that conveyed to them, and it did not adjoin any street or highway. Under these circumstances, the court of appeals holds that the plaintiff and her sister obviously acquired a right of way by necessity from and to their cemetery lot over the

remaining part of the farm. The law on the subject it says is that where a person conveys to another a piece of land surrounded by lands of the grantor, the grantee and those claiming under him have a right of way by necessity through the lands of the grantor, as an incident of the grant. And this principle applies where the land conveyed is surrounded in part by the lands of the grantor, and in part by the lands of a third person. The grantor in such a case has the right to designate the track or way, having due regard to the rights of both parties; but, if he declines or omits to exercise that right, the grantee may select for himself, and will be supported in his selection unless chargeable with palpable abuse. A right of way of necessity over the lands of a grantor, in favor of a grantee and those subsequently claiming under him, is not, however, a perpetual right of way, but continues only so long as the necessity exists. In this case the grantor was not shown to have designated the track or way to be used by the plaintiff, but she continued to use the way as it formerly existed, and was previously used by the family in passing over the farm to the cemetery. Thus, the court says she selected the old way, which must be regarded as established and consented to by the parties, as no objection seemed to have been made for years after the selection or during the continuance of its use. The doctrine here laid down it will be seen has a wide application.

* * .

The Nebraska State Cemetery Association prepared and endorsed the following bill directed against grave robbery and unlawful disinterment of bodies, which has passed the legislature. The association has been very active in its efforts to promote advanced practice in cemetery management, the preparation of proper blanks and revised methods of record, etc.:

SECTION 1. It shall be unlawful for any person or persons to dig up, disinter, remove or carry away from its place of deposit or burial any dead human body or the remains thereof, or to attempt to do the same, or to assist, incite or procure the same to be done. It shall also be unlawful for any person or persons to receive, conceal or dispose of any dead human body or the remains thereof, knowing, or having reason to know, that the same had been dug up, disinterred or removed from its place of deposit or burial as aforesaid, or to attempt to do the same, or to aid, incite, assist or encourage the same to be done, provided, however, that the above mentioned acts shall not apply to the bodies of paupers authorized to be surrendered for purposes of dissection under sections 20, 21, 22 and 23 of an act of the legislature of said State, entitled, "An Act Legalizing Dissections and for Other Purposes," and which was passed and took effect February 20, 1893; and provided further, that they shall not apply to the body of any criminal directed to be delivered up by competent authority for purposes of dissection; and also provided further, that they shall not apply to nor be construed to prevent any person or persons from removing the bodies or the remains thereof of their relatives or intimate friends from one place of burial to another; provided, however, that in case such last mentioned burial has been in any lawfully constituted cemetery consent for such removal shall be obtained from the lawfully constituted authority thereof.

SEC. 2. It shall be unlawful for any person or persons to expose, throw away or abandon any dead human body or any portion thereof in any public place, or in any river, stream, pond, or waterway or reservoir.

SEC. 3. The doing or attempting to do any of the acts declared to be unlawful in said sections one and two shall be deemed, considered and held to be a felony, upon conviction whereof the offender shall be punished by imprisonment at hard labor in the penitentiary of said State for a period of not less than one year and not longer than three years, or by a fine of \$2 500, or by both imprisonment and fine as before said.

SEC. 4. Sections 244 and 245 of chapter 23 of said Criminal Code and all other acts of said legislature, or parts of acts thereof, are hereby repealed; provided, however, the repeal of said section 244 shall not operate to prevent convictions for violations thereof prior to the going into effect of this act.

Copies of the above bill may be obtained on application to the Association. R. H. Oakley, President, Lincoln, Neb.

PARK AND CEMETERY.

Association of American Cemetery Superintendents.

G. W. CREEZY, "Harmony Grove," Salem, Mass., President.
ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., Vice-President.
F. EURICH, Woodlawn, Toledo, O., Secretary and Treasurer.

The Eleventh Annual Convention will be held at Cincinnati, O., Sept. 14, 15, 16 and 17.

* * *

The Executive Committee has issued an address to cemetery officials, setting forth the object of the association and the importance of every cemetery in having its superintendent or some other official in attendance at its annual conventions.

* * *

The programme for the convention is completed and appears in other columns of this issue.

Publishers' Department

Park Commissioners and Cemetery trustees are requested to send us copies of their reports.

Photographs and descriptive sketches of interesting features in parks and cemeteries are solicited from our readers.

We are indebted to Mr. Arthur W. Hobert, superintendent Lakewood Cemetery, Minneapolis, Minn., and Mr. T. Donlan, superintendent Oakdale Cemetery, Wilmington, N. C., for a collection of views of their respective cemeteries and descriptive matter, and to Mr. Edward Ferguson, secretary and treasurer Forest Home Cemetery, Milwaukee, Wis., for interior views of the recently completed crematorium in the cemetery.

A Question of Re-Organization!

A correspondent has submitted the following question on re-organization for information: A cemetery association having organized under "non-profitable" corporation laws, and having purchased a tract of 140 acres, with a view of improving, perpetuating and conducting the cemetery on a modern basis, finds it in consequence very slow work refunding the original outlay for the tract to the incorporators who made the purchase, and it is now desirable that the finances should be put into good shape. The cemetery has two hundred lot owners and about 1,000 interments. The by-laws permit of lot owners becoming voters on fulfillment of certain conditions. Hard times have militated against carrying out intended plans, and information is now desired as to the best possible methods to be adopted to re-organize so as to afford better facilities for carrying them out. PARK AND

CEMETERY will be glad to learn the experience of any of its readers on this question.

A Suggestion.

Mr. J. A. Thorn, Supt., Battle Grove cemetery, Cynthiana, Ky., writes: "Why not have a display of all tools, labeled, used in modern cemetery work, and invite dealers to make a similar display, such as Lawn Mowers, Edging Tools, Grass Clippers, Hooks, Pruning Tools of all kinds, and even grave digging tools, for I find a wonderful difference in them. I venture to say that many superintendents would find this an educational feature."

A Warning.

The writer's attention has been called to the fact that the Scotch thistle threatens to become a nuisance in some localities, spreading quite rapidly. As the opposite of this was assumed in the illustrated account of the plant in the July issue of PARK AND CEMETERY, it seems best to at once inform those (if there are any) who, like the writer, have not seen in it any such dangerous tendency. Mr. Warren H. Manning, who likes its looks but not its manners, says that it is already troublesome around Cincinnati, O., as well as in several localities in the east.

In view of this it will be well to treat it with great discretion where used at all.

Fanny Copley Seavey.

RECEIVED.

Maine Agricultural Experiment Station, University of Maine, Orono, Me. Bulletin No. 36, August, 1897. Testing Seeds. Contains full text of an "Act to Regulate the Sale of Agricultural Seeds, etc.

Bulletin No. 37, August, 1897. Feeding Stuff Inspection. Text of the "Act to Regulate the Sale and Analysis of Concentrated Commercial Feeding Stuff, etc."

The Trans-Mississippi and International Exposition, Omaha, Neb.

From Mr. J. Y. Craig, Superintendent Forest Lawn Cemetery, Omaha, Illustrated Pamphlet issued by the Department of the Trans-Mississippi and International Exposition, now in course of active preparation in Omaha. The pamphlet gives outline pictures of the main buildings of the Exposition, together with descriptive matter concerning the Exposition which is to be opened in 1898, the resources of Omaha and other information. Mr. Craig writes that the preparations for the Exposition are progressing most favorably. He is in hopes of inducing the Association of American Cemetery Superintendents to hold their convention of 1898 in Omaha. The ceme-

teries of themselves, which are practically in their infancy, would not offer sufficient inducements, but in connection with the Exposition there will be educational advantages worthy of attention and study, and the influence on the cemeteries of contiguous States exerted by the presence of the association in convention at Omaha in so important a year would be helpful and fraught with undoubted beneficial possibilities.

New York Gardeners' Society.

A special meeting of the New York Gardeners' Society was held in their rooms on Saturday, July 24, for the purpose of distributing the prizes won at their exhibition in the City Hall in June.

The president, Mr. John Shore, in handing the winners the several valuable cups and money prizes, accompanied them with suitable remarks, which were responded to by the recipients.

An exhibition of canna and other flowers will be given at the time of the society's first annual dinner, on the second Saturday in September, and a Chrysanthemum Show will be held in November.

On the exhibition table were some very fine seedling cannas, raised by Mr. A. L. Marshall of Pawling, N. Y., one of which a large, deep crimson flower named John B. Dutcher, which is an improvement on Chas. Henderson, was awarded the Society's certificate.

Messrs. John M. Hunter and A. Welsing also made displays of new and standard varieties of canna. The latter showed a vase of asters, which were much admired.

A certificate of merit was awarded Mr. Ferdinand Mangold for a new Cyprideum.

The next meeting of the society will be held on the occasion of the dinner on September 11, which will be a great event amongst the gardeners of this section.

James I. Donlan.

"A Good Idea."

It has been suggested and we believe it a good idea for the members of the Association of American Cemetery Superintendents coming from the north and west to arrange their arrival in Chicago, so as to go from this city to Cincinnati together, thereby insuring a pleasant trip and renewal of friendship. The Big Four Route, having unsurpassed equipment with three trains a day, has arranged to take care of our party. Buy your tickets through to Cincinnati, asking the agent that they route you via the Big Four Line for Chicago. Should you desire any further information—rates, time, etc., address J. C. Tucker, 234 Clark street, Chicago.

SITUATIONS WANTED, ETC.

Advertisements, limited to five lines will be inserted in this column at the rate of 50 cents each insertion, 7 words to a line. Cash must accompany order.

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Wanted a situation as Cemetery Superintendent by a married man, age 36 years, understands laying out grounds, can give best of reference, am now superintendent of incorporated cemetery. Address, American, care of PARK AND CEMETERY.

The Logan Statue, Chicago.

The equestrian statue of General John A. Logan, long anticipated, and from which so much was expected was dedicated on the Lake Front Park, Chicago, July 22nd, with very imposing ceremonies. In fact the occasion was made a public holiday, and was participated in by the Secretary of War, governors from several states, the regular army, G. A. R. and many other organizations. The government had assembled between two and three thousand troops to join in the parade and honor the ceremonies. The statue was unveiled in the presence of Mrs. John A. Logan and the general's descendants, the unveiling being done by the grandson. The monument is undoubtedly a splendid piece of work and seems to have given general satisfaction and to have evoked commendation from all sides. Congratulations were warmly pressed upon the sculptor, St. Gaudens, who with his family was present. Mr. Stanford White, the architect and Mr. Merritt, secretary of the Henry Bonnard Bronze Co., and who supervised the erection of the work, were also present. The bronze statue stands 23 feet high over all, and is mounted on a pedestal of polished Rockport granite. The lower part of the structure is also a mausoleum for the reception of the general's remains and those of Mrs. Logan in due course. The flag which is a conspicuous part of the statue is of cast bronze, and weighs over half a ton. Such accessories are more often made of hammered metal. The grand group is a valuable addition to the statuary of Chicago, which also possesses St. Gaudens "Lincoln."

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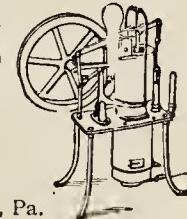
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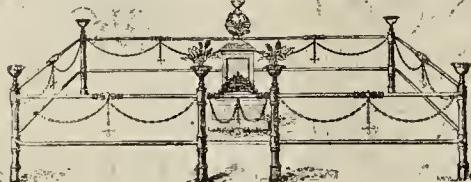
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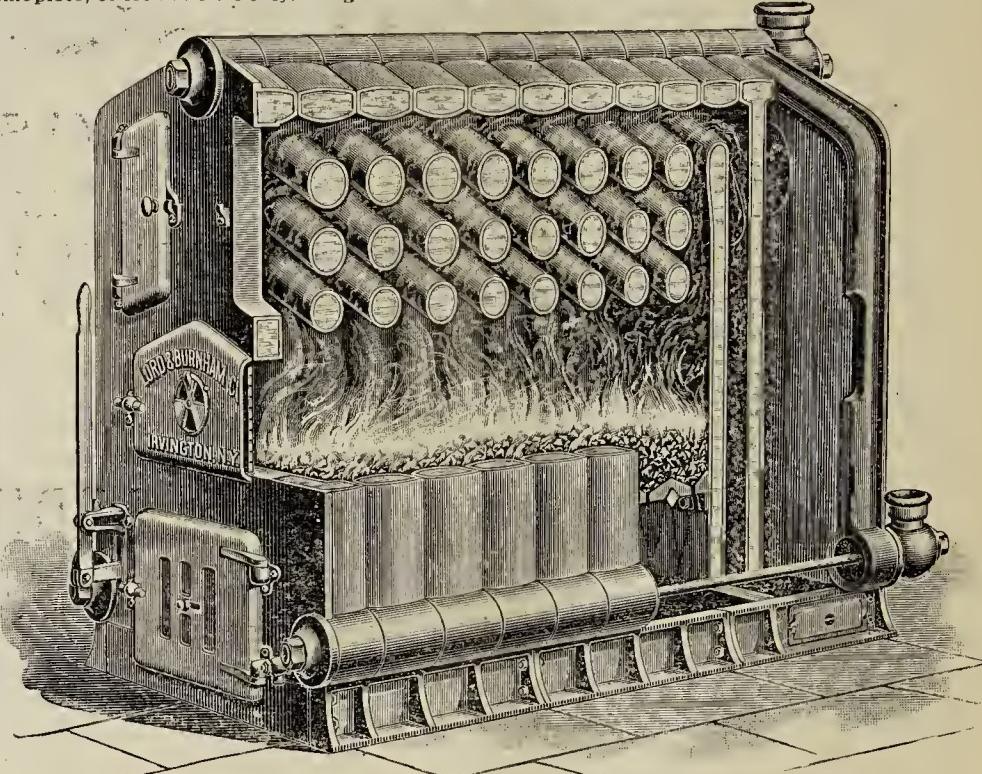
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CONTENTS.

EDITORIAL—CONVENTION OF A. A. C. S.—SMALL PARKS AND PLAY GROUNDS—VILLAGE IMPROVEMENT SOCIETIES—PUBLIC MONUMENTS.....	151
*RESIDENCE STREETS, I.....	152
CEMETERY IMPROVEMENT	153
*THE CHAPMAN MONUMENT, MILWAUKEE, WIS.....	155
*THE CINCINNATI CONVENTION OF THE AMERICAN ASSOCIATION OF CEMETERY SUPERINTENDENTS	156
*A GLIMPSE AT FINSBURY PARK, LONDON, ENG	160
*STATUE OF GEN. LOGAN, LAKE FRONT PARK, CHICAGO	161
*PROSPECT PARK, BROOKLYN	162
*LAKEWOOD CEMETERY, MINNEAPOLIS, MINN	164
*GARDEN PLANTS; THEIR GEOGRAPHY, XXII.....	166
*THE ROSTRUM, NATIONAL CEMETERY, GETTYSBURG	169
*THE CREMATORIUM, FOREST HOME CEMETERY, MILWAUKEE, WIS.....	171
SOME NATIVE PLANTS	172
PARK NOTES	173
CEMETERY NOTES.....	174
PUBLISHER'S DEPARTMENT.....	176

*Illustrated.

THE Eleventh Annual Convention of the Association of American Cemetery Superintendents, held at Cincinnati this month, passed off in a manner highly satisfactory to all concerned. In point of numbers it was the largest gathering in the annals of the association, and was especially gratifying from the fact that among those attending were many trustees and other cemetery officials. To get the work of the association properly understood by the cemetery organizations it has been the aim of its officers so to impress its objects upon the managing officials, that they might see the necessity of attending the meetings, if not joining its membership, so that by the mutual exchange of experience and knowledge and the discussion of pertinent matters, progress in all departments of cemetery work might be made more positive and effective. In this direction the Cincinnati meeting promises better results than any previous convention, and we doubt not but the coming year will witness its beneficial effects in many directions. A condensed report of the meeting will be found elsewhere in this issue.

THE small park and playground idea is rapidly assuming an unforeseen development in New York City, a development as interesting to all overcrowded districts, wherever they may be

found in our large cities. By an act of the legislature one million dollars per annum may be expended in New York City in creating small parks and open spaces where the crowded conditions of population make it necessary. In one park recently opened the children of the neighborhood claimed it for themselves, practically demonstrating the imperative requirements of the little ones in their unfortunate surroundings. The whole question of the duty of the people to these little folks has become a burning one, and not only is it decreed that schoolhouses shall have ample space for playgrounds, if not on the ground level at any rate in the buildings and on the roofs, but it is probable that the present situation may be relieved by some co-operation between the Park board and School board looking to the better provision of playground facilities for the children. The whole question is a pertinent one for our cities generally. It is especially so in Chicago. According to Prof. Nicholas Murray Butler, of New York, the school houses should be allowed to fulfill a further limit of usefulness, when not in use for their primal object, that of providing a public meeting house for the neighborhood, for all purposes where the people have a common interest, politics and religion being barred. Truly we are living in a growing age.

"EVERY town should have an active village improvement society" is the opening sentence of a Massachusetts contemporary, and it is a statement that can be sincerely endorsed. There is work enough in every community for such an organization, and its existence is always a deterrent to common abuses. Its activities can well be turned to the care of the village park plot, should there be one, or to the burial ground, and these two objects of necessary care will repay a hundred fold in the respect of the community for its environments, to say nothing of the benefits returned in the increased value of holdings and the higher educational sentiment aroused. The trees of the village require continual care for their proper development, and nothing repays such care to better advantage. The Tree Planting Association of Brooklyn, N. Y., has proved itself a boon to the whole country by the intelligent way it has perfected its organization, and the zeal and activity it has succeeded in bringing into play to protect and care for the trees of that beautiful city. It may be addressed for information, and its literature will create a boom in favor of the trees in any Improvement Society securing it. The varying conditions governing our communities will suggest at once the most needful line of endeav-

PARK AND CEMETERY.

vor, and a campaign along this line will suggest new victories to be won on other lines, to the ultimate benefit of all.

THE growing taste for art is a matter for congratulation. It is the sure sign of a progressive development on lines of permanent value to a nation. It shows that there is a reaching out for higher things in our national life, and that devotion to its sordid matters is becoming suffused with aspirations for those higher things that impart a true zest to life, and give it tone and fullness. As with many phases of this remarkable American progress of ours, taste in art matters is developing more rapidly than the means for its rational guidance and control. Take, for instance, the question of monumental art for our public places. On all sides we hear of proposed monuments, in the great majority of cases in honor of men whom a grateful community believe worthy of a public memorial. Leaving out the important question of whether the community has intelligently weighed the claims of the subject to so enduring an honor, the still more important question suggests itself to what tribunal shall the matter of design, appropriateness and artistic merit of the proposed memorial be submitted? Hitherto, practically speaking, there has been none. A business organization is effected to carry out the purpose of the community, and in this is generally merged the authority to decide upon the points mentioned above, points of such significance that but a comparatively insignificant few, even in the largest places, are competent to pronounce upon them. A public monument is an important undertaking. In its inception the honor is not governed by considerations of a temporary character; a monument carries with it the idea of the future. Not only is the subject honored for the present, but his virtues are presumed to be worthy of the respect of future generations. Here is enough to suggest the necessity of competent judgment on the worthiness of the subject; but it goes much further. It carries with it the suggestion of the necessity of presenting to future generations the best possible evidences of the civilization of to-day as represented in its plastic art. Even the portraiture of the subject loses its value in the higher consideration of the artistic merit of the work. For it is the artistic development as expressed in the monument that will speak most loudly in the future. To develope these suggestions will lead most certainly to the conclusion that to properly qualified authority must be submitted all questions of public monumental art, and, however much we may blind ourselves to facts, they declare that *most* of the public monuments now standing are unworthy the art of a great nation. What is the remedy? An art commission in every

large center, composed of men free in every way from entanglements to warp their judgment, and thoroughly competent to exercise that judgment on questions of art. Public taste needs guidance and control, and within these limitations it will rapidly assert itself.

RESIDENCE STREETS, I.

It is proposed in the following papers to discuss certain features of residence streets—namely: Their location and drainage, the lines and construction of the roadbed, sidewalks, crossings and curbing, and the planting of the borders, with a view to ascertaining if the present method is correct, and, if not, what improvements can be made that will add to the comfort of those who walk or ride. The importance of this subject is not fully appreciated. The street is a most important part of those environments which, with one's house and lot, go to make up his home. A good roadway, smooth and agreeable sidewalks, with roadsides made beautiful by suitable planting, and all well taken care of, add to the value of a man's residence just as the beautiful house and grounds of a neighbor will add to the value of one's own property; while, on the contrary, roads and sidewalks poorly made or out of repair, and dead or ugly trees, will detract from its value as much as would an obnoxious building. There are many who appreciate the beauty of a public park. The writer claims to be one of these, but still he thinks the artistic treatment of a residence street is as important as the acquiring of beautiful public parks. The streets must be used by all the residents, while the parks may be visited by only a portion of them. The streets are used by most people every day, while those who visit the parks may go at infrequent intervals. The streets are seen from the windows and verandas of houses almost continually.

Some of the topics mentioned in the first paragraph may lead the reader to think that they will be treated from an engineering point of view, but the aim is rather to consider them with regard to their effect upon the popular use and enjoyment of public highways.

Location.

It is generally conceded that streets running north and south are better for residences than those running east and west, the advantage of the former being that the houses, even though close together, are sure to get sunlight from two directions, while houses on the latter streets frequently receive sunlight only from the south. The street itself also gets a better distribution of sunlight when running north and south. Streets running in other directions than those mentioned have an advantage over

east and west streets, and, if the houses are far apart, may have an advantage over north and south streets as to light, since all the rooms will receive

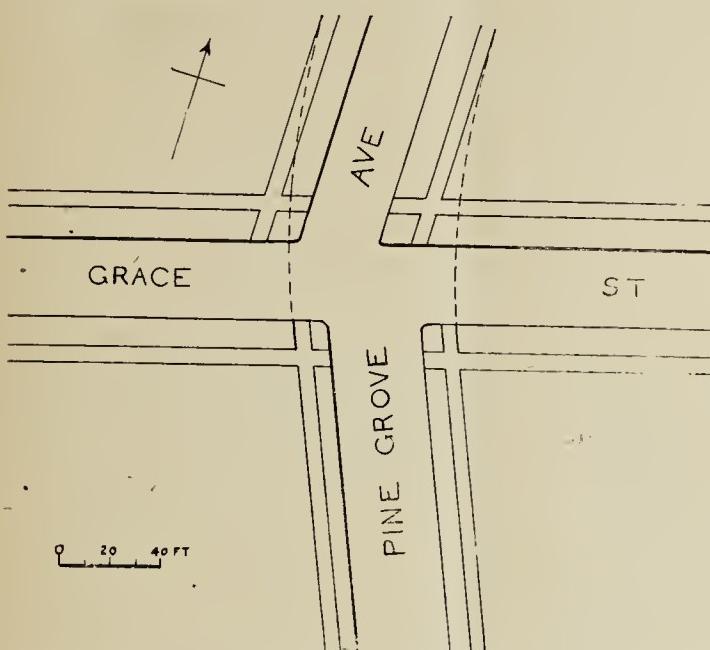


FIG. 1.—SHOWING PLAN OF AN ACTUAL STREET INTERSECTION. THE DOTTED LINES SHOW HOW A CURVE MIGHT HAVE BEEN USED TO ADVANTAGE.

sunshine some time during the day. On east and west streets, those lying east of the business portion of the city give the residents the advantage of having the sun at their backs when going to their work in the morning and also on returning home in the evening.

A slight curve in a street is more pleasing than a straight line, but it should only be used when it is accompanied by some practical advantage—some

economy in space or distance, an easier or less expensive grade, or the preservation of valuable trees, or an attractive river view. The pleasure of a curved street is due principally, perhaps, to the fact that a portion is hidden, thus exciting our curiosity as to what is not in sight, but it is also due to the greater beauty of the lines, the shortening the distance to the point we wish to reach, and the variety in light and shade caused by change of direction. The curve in question will usually be more satisfactory if it is not the arc of a circle, or any geometrical line. In laying out a new street which, on account of the topography or for some other good reason is to be curved, it will frequently be found more expeditious and satisfactory to stake the lines by eye, and have the accurate survey made afterwards, only such preliminary measurements being taken as will insure the requisite depth of lots. When a curved street is properly staked out there will be no tendency to drive into its margin, since it will lead in a natural manner to the point one wishes to reach. A gradual change in a vertical direction is just as pleasing as one in a horizontal direction. The lowest point in such a curve should not be at a street intersection.

O. C. Simonds.

CEMETERY IMPROVEMENT.

There are two plates in your March number, (plates 2 and 4, pp. 6 and 7) which together convey my idea of a means to reconcile the two prevailing styles of cemetery improvement, with con-



FIG. 2. CURVES THAT ARE EXASPERATING BECAUSE UGLY AND USELESS. THEY DO NOT HELP THE GRADE AND THEY LENGTHEN THE DISTANCE.

siderable completeness. Plate 2 represents much of what the interior of the sections should be, and plate 4 their margins. Margins bordering the roadways and the boundaries.

Such a disposition would bring the valuable features to the front where they ought to be, hide out the more objectionable features with more or less thoroughness, and afford unlimited scope to the art and knowledge of the Landscape Gardener.

It would afford all lot owners almost unlimited liberty. There might or might not be some control as to the artistic merit of the monuments to be admitted to the more valuable marginal lots, which plate 4 in some measure represents; but it seems to me the great mass of people who would lay their loved ones within the sections indicated by plate 2, should be left largely untrammelled.

The planting features as I have said would depend upon the superintending gardener, who should not only be competent, but retained as long as possible. To be sure small communities cannot afford the best ability permanently, but they can secure it for the initial planting, and for annual or semi-annual consultation or visits. Nothing can take the place of personal oversight, for no plans however elaborate and expensive can convey the arts and kindly cares which embellish the work of the skilled gardener. No one need seek far to find the lofty promises of a \$3,000 plan sunken in the lowermost depths of disorder, and the landscape gardener of veracious insight will look in vain for their consistent fulfillment. Nine times in ten they promise golden results, while nothing remains of artistic conception but the advertising paper.

It is not uncommon for landscape conceptions to be buried under a perfect avalanche of rhetorical flourish, and provided the sense of the patrons is gratified by that which they can admire, they have neither time nor heart to give attention to the infinitely more important art outdoors—and they are fain to leave it to the base competition of a horde of contractors, who in their turn have no possible interest beyond selling a bill of trees.

Be very sure these ways must be abandoned.

Landscape art of the purest and best is simple. It neither depends on flourishes of rhetoric, or flourishes on paper.

It does depend on profound knowledge, reduced to the uttermost simplicity.

Nature works with an infinite multitude of forms, but they are reducible to a few well defined groups, and the elements of a given landscape are but few.

The wants of mankind must be consulted to-day however; the individual is becoming more and more unrestful, and the better his mind and body

can be disciplined and broadened, the better he will be satisfied with his particular environment.

There is nothing known that can so truly enchain a population, as salubrity, fertility and beauty of their motherland, and those who are bereft of it, are wretched indeed.

Fertility is not expressed in the forest waste, the cane-brake, on the Mangrove swamp. They are the very embodiment of gloom and desolation, and the garden group which emulates their features however little is ultimately a failure.

A pleasing landscape is varied, and vivacious, and may be so whether animated or not. The most beautiful plateau I have ever seen lacked population in part, because its western climate for eight months was perpetual drizzle. When that passed, the site may have inspired Martin.

There is nothing then in the *loneliness* of the cemetery to detract from its beauty.

The disposition of its belts and groups and specimen plants, the convenience of access, and the planting out of its stoneyard will improve it.

Trenton, N. J.

James MacPherson.

A BEAUTIFUL GARDEN.

A writer in an exchange speaks glowingly of the garden of Mr. Joseph Chamberlain, the English Colonial secretary, at his seat near Birmingham, England:

A considerable portion of his garden of Highbury is wild and uncultivated and consists of copse, dell and stream, and the mixture of this wild loveliness with the cultivated garden forms one of the chief charms of the place. Mr. Chamberlain is justly proud of his orchid collection, which is marvelous in its range from oriental brilliancy to the most fairy-like delicacy of hue. His orchid houses number fourteen and all open off one side of a corridor and their beauty is not to be told in words, the wealth and wonder of gorgeous coloring being unsurpassed.

Thirty men, under charge of a head gardener, keep in order Mr. Chamberlain's garden. Little dells carpeted with bluebells and primroses and tiny pools bordered with reeds and rushes and shining with water-lilies are found next closely trimmed lawns; and at one spot known as the Oak pool is Mr. Chamberlain's favorite seat. The lake there is overhung with willows and laburnums and gemmed with irises; swans and storks are to be seen; there are foamy water-falls and little bridges and woodlands thick with blossoms—violets, anemones and primroses.

There is a rosery laid out in prim beds edged with box, the square precision of the plat being broken by four arbors, of mauve clematis, foam-white roses, honeysuckle and pink roses. There are all varieties of roses here. The kitchen garden and fruit walks have vines, apricots and peaches, and altogether the grounds around Highbury are lovely enough to convert a saint into a sinner through envy.

THE CHAPMAN MONUMENT, FOREST HOME CEMETERY, MILWAUKEE, WIS.

Much has been said in these columns at various times on the subject of diversity of design and artistic requirements in our cemetery memorials, and it is a subject to which too much attention cannot be paid, either by the monument designer or monument dealer. No effort should be spared to educate all concerned in the manifest obligation of providing the most artistic memorials possible to perpetuate the memory of our dead, whether of low or

be far less costly, yet the idea is still important enough to present itself as a pertinent issue to all concerned.

The Chapman monument was erected in the spring in Forest Home Cemetery, Milwaukee, Wis., and the illustration is sufficiently explanatory concerning the classic grace, dignity and beauty of its design. The sarcophagus is cut from pink Tennessee marble, a marble which is much favored by Boston and other Eastern architects. It stands on a base of pink granite, making a harmonious com-



THE CHAPMAN MONUMENT, MILWAUKEE, WIS.—D. C. FRENCH, SC.

high cost. It would surprise, perhaps, most of our readers to realize how much space is now given in the public press to our old cemeteries, and it would be food for pretty serious thought to know how comparatively short a time the ordinary tombstone lasts. Having no artistic merit, it has little but historic value for future generations. But put some merit into as many memorials as possible, and future generations will understand their import and will preserve and respect them.

These thoughts are suggested by the illustration herewith presented of the Chapman monument, designed by the sculptor, Daniel C. French, in collaboration with Mr. C. Howard Walker, architect, Boston. The term suggestion is used advisedly, for it is certain the great majority of monuments must

bination of material. The winged figure, a feature of sculptural art in which Mr. French is particularly effective, is of bronze, and was very successfully cast by the Henry Bonnard Bronze Co., of New York.

The occasion is not nearly so frequent as we should desire to illustrate cemetery memorials in which our leading sculptors have the opportunity of displaying their work, but it is to be sincerely hoped that with another era of prosperity in the country this field for our worthy sculptors will offer inducements for the exercise of their genius in its true sense, for with the perpetual care system of our cemeteries it is reasonable to expect that we shall have to record many artistic memorials to carry out the arguments suggested in our opening lines.

PARK AND CEMETERY.

THE CINCINNATI CONVENTION OF THE ASSOCIATION OF AMERICAN CEMETERY SUPERINTENDENTS.

The eleventh annual convention of the Association of American Cemetery Superintendents held at the Grand Hotel, Cincinnati, O., September 14th to 17th, brought together by far the largest number of superintendents that have yet attended a meeting of the association.

At the opening session the Rev. A. Smith, of Cincinnati, invoked the Divine blessing upon the meeting and Mayor Tafel extended a cordial welcome to the city. New members to the number of sixteen were received and enrolled, after which President George W. Creesy read his annual address as follows:

PRESIDENT'S ADDRESS.

Ladies, Gentlemen and Friends of the Association:—It gives me much pleasure to welcome you to our Eleventh Annual Convention.

As we have now reached the ten-year mark of our existence, it seems appropriate that we take a brief review of our past. From the original idea of our brother, Charles Nichols, was devised the scheme of meeting at a given place once a year for the exchange of experiences, and also to visit the various cemeteries. Consequently, in answer to such an appeal, some twenty-five signified to him their desire to attend such a meeting, and through the courtesy of Mr. Wm. Salway we met here in Cincinnati, October 19, 1887, and the body known as the Association of American Cemetery Superintendents was duly established, with Charles Nichols as president, and too much credit cannot be given him, and our first secretary, A. H. Sargent of Akron, O., for to these men more than to any one else do we owe our present existence.

Our key word was then, as now, *Stewardship*, and it contains three ideas, namely: Unity, Growth, Knowledge.

The first, Unity, we have ever sought to establish, knowing full well that subjects must arise, such as cremation, tombs, etc., which would naturally cause differences of opinion. But as we recognized the fact that each had equal right to his own view, and need only to accept or reject the same, according to his knowledge, there has been preserved to us that unity which is the true secret of our success, and which we trust will never be dissolved.

Second, Growth. From twenty members we have reached nearly two hundred in number, these men representing cemeteries from almost every State.

Third, Knowledge. We, who have been privileged to attend the meetings from year to year, know that our growth in numbers is small compared with the *real* knowledge we have attained from the interchange of thought and listening to some most able papers, such as: "Right Management of the Modern Cemetery," "Landscape Gardening," "Monuments and Vaults," "How to Secure the Finest Lawn or the Best Road" and "How to Manage Our Laborers."

These and many others have given us most helpful instruction, and here I would like to express to the association my thanks for the great benefit derived from the united opinions, as well as to your printed matter relating to the removal of iron fences, curbing, hedges, and with which the cemetery represented by myself was filled to overflowing. I had tried to reach a few lot owners, but met with poor success until handing them some of our printed matter on the subject, and with the help of our trustees, they realizing that they were behind their sister cemeteries, we have removed some five hundred such inclosures. Thus can be felt the real worth of this organization. I want also to mention right here a book, lately published, on Mortuary Law, which answers many perplexing questions, and would prove itself of untold value to each member.

Nor must we forget to make mention of the knowledge derived from the different cities which we have visited through the kindness of our different brethren, the drives, walks and sights seen at Cincinnati, Brooklyn, Detroit, Boston, Chicago, Baltimore, Minneapolis, Philadelphia, Richmond, St. Louis, and where we now are.

During the year past two of our members have ceased from their labors: Enos Kellogg, Norwalk, Conn., and Abraham Bull, who was sexton of Lake View Cemetery, Jamestown, N. J., for thirty-three years.

"Oft as the bell with solemn toll,
Informs us of a parting soul,
Teach us to think how short the space
Ere we, too, take *our* resting place.

"Oh! may each act when others die
Prove to ourselves a warning cry,
Advance us on our homeward road,
And fit us each to meet our God."

Thus as we have proven our value in the first ten years of our existence, let us in the future strive to achieve still more by larger attendance at the conventions, by faithfully reading our paper, PARK AND CEMETERY, by being willing to contribute our experiences for the good of others, and in the next ten years our growth will not be measured by numbers, but its influence will be felt throughout this whole United States. And what more noble or uplifting work could we engage in than the raising high the standard of the last resting place of our beloved dead.

The report of Secretary and Treasurer Eurich showed a flourishing financial condition and a membership of 143 at the close of the fiscal year. 1,000 copies of the report of the St. Louis convention were printed in pamphlet form for sale and distribution among the members.

The papers read at the morning and evening sessions were as follows:

"History and Usefulness of the Association of American Cemetery Superintendents," by Mr. Charles Nichols, Newark, N. J. "The Influence of the Association," by Mr. William Stone, Lynn, Mass., and "The Influence of Surroundings," by Sidney J. Hare, Kansas City, Mo. Among the reforms which Mr. Stone thought could be brought about through the influence of the association was the doing away with Sunday funerals, and in the discussion which followed his very suggestive paper, it was voted as the sense of the meeting that Sunday funerals should be discouraged.

In his paper Mr. Hare said in part:

Show me a city without parks and boulevards and I will show you a people far behind the times in every way.

Parks educate the people in an art equally as grand as the art of painting or sculpture, or art fancy work. It influences people to adorn their home grounds, to plant trees and shrubs, and to study nature, the mother of all true art.

This study leads them to see the beauty of a modern cemetery, with its vistas, well kept lawns and bright foliage, and makes them shun the old style grave yard.

As one of my friends said to me recently, the sight of a beautiful cemetery drove from his mind all thought of death, while a country cemetery with its uncared for graves and broken down monuments sent a shudder over him and made him think death was a horrible thing.

In many of our cities we see wonderful transformations, we see blocks of dilapidated buildings torn down, graders set to work, trees and shrubs planted in groups along gracefully curved walks, large stretches of ground sodded, and the whole transformed into a lovely park. All this is done under the guiding hand of one who has made a study of landscape gardening and knows the uses and beauties of trees and shrubs when planted according to a well studied design.

Have you ever thought how a park would look if the city had invited the lotowners adjoining this ground to come and plant as they chose, to lay out walks, and to fix it up to please themselves.

* * *

In our cemeteries everything done should be toward adornment of the ground as a whole.

I would like to see the cemetery more beautiful than the most handsomely laid out park. To do this lotowners must learn two things, namely: All cannot direct in the landscape work, and all cannot plant as they choose, and have good results.

Better let one plan, one carefully studied plan, govern all planting of trees and shrubs, and this alone will make harmony and beauty of landscape.

When you find a prospective purchaser who wishes to do as he pleases, and plant as he pleases, better make no sale to him.

You can well afford to lose a sale now and then rather than have the beauty of the whole cemetery marred.

Could some of our lotowners see the best parks of our country with their velvety lawns, walks with lines of beauty in every curve, mirror lakes and groups of ornamental trees and shrubs, so set on the beautiful lawns as to give long vistas and delightful scenes, then could we by magic turn the whole scene into a cemetery!

* * *

The features that add the greatest beauty to a cemetery are the trees and shrubs, and well kept lawns, and well made drives, and we should know more about them.

We should have at hand the value of each tree and shrub used in general landscape work, and it should be in such form that we are not required to spend hours in looking through volumes to find it. We should know their value either for flower or foliage for spring effects, summer and fall effects on the lawn.

Their rapidity of growth, height and spread, winter effect of stem and bark, whether they form suckers or not, when and how to prune, best soil adapted, best location to insure success, whether open or protected, sunny or shady, high or low, moist or dry, etc. Then how to propagate, and lastly, yet first to us, how to use them, whether simply or in groups of the same, or with groups of others and with what others.

For several years I have been compiling such data of the trees and shrubs adapted to landscape work.

The afternoon was devoted to a trolley ride of at least fifty miles in special cars through the city and suburbs.

At the morning session of the second day three interesting papers were read, viz: "How to Make and Maintain a Lawn," by George H. Scott, of Chicago. "A Lady's Experience in Cemetery Management," by Mrs. E. E. Hay, Supt. Erie Cemetery, Erie, Pa., and "Review of the St. Louis

Meeting," by O. C. Simonds, of Chicago. Mrs. Hay's paper was a concise account of her management of a cemetery of 75 acres and its consequent responsibilities. She was elected to succeed her late husband, as superintendent several years ago and some of the reforms that she has introduced in the new sections, which are conducted on the lawn plan, with perpetual care, include the abolishing of grave mounds, and gravel paths around lots. The new lawns recently adopted by the association prohibit lot enclosures and they are gradually disappearing from the older sections. Tents are used in stormy weather and death is robbed of some of its terrors by having the graves tastefully decorated and the excavated earth hidden from view. A new lodge recently completed is constructed of red stone, modern in all of its appointments for the transaction of business and the comfort of lot owners. Mrs. Hay employs and discharges all of the labor and while her position is a busy and at times a trying one, there are pleasant experiences to compensate for the trials. She endeavors to keep herself informed in every possible way as to the best means of furthering the interests of her cemetery, and enjoys the confidence and esteem of her cemetery trustees and lot owners. Mrs. Hay is the only representative of her sex in the Superintendent's association and at the close of her admirable paper she was given a rising vote of thanks.

Mr. Simond's "Review of the St. Louis Meeting" emphasized the salient features of the many excellent papers read at that time, referred to the benefits derived from the places visited and recommended having lot owners and cemetery officials in attendance at the meetings of the association.

The secretary read a paper written by Mr. L. A. Breggan of Chicago, on "Care and Judgment in Selling Lots." It dwelt upon the importance of preserving the best features of the lawn plan and how this could be accomplished by superintendents using proper discrimination when selling lots. To sell the right lot to the right person should be the superintendents aim,

The "Question Box" furnished several subjects for discussion. "How to get rid of Dandelions" elicited such replies as "dig them out," "keep them cut close with the lawn mower," "apply a few drops of sulphuric acid to the crown of each plant," "Turn over the soil in the fall, leave it exposed until spring and fork it over to remove the roots of this abnoxious weed." Only a very small percentage of the cemeteries represented allowed outside gardeners the privilege of doing work for lot owners.

The afternoon was most agreeably spent. Trolley cars conducted the party to the Mt. Adams Inclined Plane, the ascent of which, by being elevated with-

PARK AND CEMETERY.

out leaving the car, was a novel experience. An inspection of the famous Rookwood Pottery, a visit to the beautifully situated Art Museum, Eden Park, and last but not least the well stocked Zoo afforded more than enough pleasurable sight seeing for the limited time.

To escape the heat of the city the evening session was held on the balcony of the Pavilion at Chester Park, an amusement resort in the suburbs. The novelty of an open air meeting in the evening was much enjoyed. Two papers of unusual interest were read by non-members. "A Half Hour with Insects Injurious and Beneficial," by Mr. Charles Dury, an active member of the Cincinnati Society of Natural History, was replete with interest. Mr. Albert McCullough of Cincinnati read an instructive paper on "Grasses and Weeds." The third day

riages transported the visitors to Calvary and Woodland Cemeteries, but rain prevented more than a drive through the grounds.

Supt. Cline gathered his guests upon the roomy balcony of his modern residence, and introduced Mayor Linxweiler of Dayton, who welcomed the superintendents and their friends to the "Gem City" in a very pleasing address. In the temporary absence of President Creesy Mr. Scott of Chicago responded in his most happy vein. Refreshments were served and a social hour enjoyed until nearly nightfall, when the party returned to Cincinnati, grateful to the Daytonians for their hospitable entertainment.

The programme for the fourth and last day of the convention provided rare enjoyment, well calculated to impress upon each of the favored ones that it was well for him to have been there. By courtesy of the Funeral Directors' Association of Cincinnati, twenty-five carriages were provided for a morning ride through the winding drives of beautifully undulating Burnett Woods Park to aristocratic Clifton, where the lamented Strauch first gave play to his genius. The ample grounds surrounding the residences of the elite of Cincinnati were viewed from the carriages until reaching Oakwoods, the home of Mr. Henry Probasco, Cincinnati's foremost citizen, and for a quarter of a century the honored President of Spring Grove. Mr. and Mrs. Probasco met their visitors at the gateway and conducted them through the grounds. The visitors were very cordially

entertained in Mr. Probasco's palatial residence, where he read them the following address:

Ladies and Gentlemen: You have already been cordially welcomed to Cincinnati, as the representatives of our sister cities, to your Annual Convention, in which we rejoice to possess a common interest. You do not meet to promote personal, political, financial or religious interests, important as they may be in their place, but nevertheless they are of high importance to each community of which you are the honored members here, in a body, that ten years ago had scarcely an existence as a body of men, who determined to advance their profession for the public good.

And so to day you possess the conscious pride of being superintendents not only of lawn and park cemeteries, but also the improvement of city and village grounds that are surely developing also for the living, who, thus alike, honor the dead. You unite, with your fellow men, in noble efforts, as well as with artists, lovers of nature and religion, to make the last resting places of those once dear to the living, homes where each soul holds communion with those who were their loved and dearest on earth.

It is true that this country now ranks with other nations in its cemeteries, in their monuments, their rules and regulations and their freedom to adopt whatever is admitted to be an advance and which exalts their spiritual nature.



A QUIET NOOK IN SPRING GROVE.

of the convention was devoted entirely to a visit to the neighboring city of Dayton, O. Directors of the Woodland and Calvary Cemeteries met the party at the railroad station. The morning was spent on the grounds of the National Home for Disabled Volunteer Soldiers, which comprise approximately 600 acres on a plateau overlooking the city of Dayton some three miles distant. The grounds and buildings erected to date have cost \$1,500,000, and amply repay a visit to see how Uncle Sam cares for his wards. After dining at the "Home Hotel" the party next visited the factory of the National Cash Register Company, situated in the suburbs of Dayton. The plant covers nearly nine acres of floor space, and the excellent system of management that dominates every department justly places it among the model factories of the world. Car-



ENTRANCE TO OAKWOODS, CLIFTON—THE HOME OF
MR. HENRY PROBASCO.

It must be admitted also, that much is due to the influence of the American Cemetery Superintendents, that many of our States, by legislative enactments, have given charters, with corporate powers, to assure the people of their permanency in all future time. Of course much yet remains to be done, and it is the very purpose of these reunions, to exchange intelligence, compare with each other by annual experience, whatever may advance their management, in all that relates to their profession, as well as the interest of the lot owners and the trustees. They recognize also, the need of the higher education of the young men, who are striving to attain education, in the knowledge of the Art of Landscape Gardening, with its allied sciences, that are to make them competent hereafter for positions as superintendents in cemeteries and parks of our growing cities and villages, as well as our larger suburban homes, that increase with the growth of the country.

And this brings me to say a last word on the importance of this special education not generally considered in schools or colleges. Scarcely a word has been said yet, to young men, to excite their ambition, to stimulate their energies, to urge upon them the vast knowledge before them before they can ever dream of equalling men such as Olmsted and Sargent and others at home, or the great names such as Puckler Muskau in Germany, Michaux, Andre and Alphand in France, and J. C. Loudon, Strutt, Repton and others in England, not to speak of a hundred more whose works should be studied carefully, after elementary instruction.

Our suburban life increases rapidly, more so than its higher wants are now supplied. The land sold is too limited in quantity for gardens and shrubberies, which would vastly adorn many of the really handsome buildings, that command our admiration. Each superior home should have its appropriate surroundings of shrubs and trees and gardens that contribute so much to the refinements of social life, and add to the interest of domestic home life, the happiest on earth. Yours be the responsibility to train young men of character, to educate those whose examinations might prove them to possess abilities such as will advance your profession in the near future, as far exceeding your anticipations, as this 11th meeting exceeded the first one in 1887 in Cincinnati.

The carriage drive was continued to the adjoining estate known as "Scarlet Oaks," which, like Oakwoods, overlooks the Mill Creek Valley, and affords a view of fifteen miles up and down that picturesque country. Chester Park was reached at noon, where a substantial lunch was served on the spacious balcony of the Pavilion. The final business meeting was held here, the officers for the past year were re-elected, and President Creesy named the following gentlemen as the executive committee for 1897-98: J. Y. Craig, Omaha, Neb., chairman; Sid J. Hare, Kansas City, Mo., and John M.

Boxell, St. Paul, Minn. Omaha was chosen as the place of meeting for 1898.

At the suggestion of Mr. Brazill a committee was appointed to condense the most important papers and discussions printed in the reports of the meetings of the association for the past ten years, and have them published in book form as a text book for cemetery superintendents. A paper which had been unavoidably omitted at a previous session on "Landscape Engineering as Applied to Parks and Cemeteries" was read by Mr. Punshon of Cincinnati. The report of the committee on resolutions was read, ending the business of the convention. The executive committee had, however, reserved the visit to Spring Grove for the last afternoon, and the time was most profitably spent in inspecting the many points of interest within these beautiful grounds. More than two-thirds of the 600 acres in Spring Grove have been improved on the lines laid down by Mr. Strauch many years ago. The broad undulating lawns, a dozen lakes, magnificent trees, and well kept roads were an inspiration to the visitors. In every improvement that is made the principle kept in mind is that, what is worth doing at all is worth doing well. The pleasant afternoon was brought to a close at the home of Mr. and Mrs. Salway, where refreshments were served on the lawn.

In the evening a banquet was tendered the superintendents in the dining hall of the Grand Hotel. The tables were beautifully decorated with flowers, and the menu interspersed with vocal selections by a male quartet made the occasion the most brilliant affair of the kind ever enjoyed by the association. Colonel Howard Saxby, the well-known newspaper man, acted as toastmaster, and during the evening was given a pleasant surprise by being made the recipient of a gold scarf pin in the form of a skull with diamond eyes, a present from the executive



CASCADE IN SPRING GROVE.

committee. The toasts were: "Perpetual Care," by B. D. Judson, Albany, N. Y.; "Before and After Making Improvements," by S. J. Hare, Kansas City, Mo., and "The Past, Present and Future of the Association," by Bellett Lawson of Chicago.

A GLIMPSE AT FINSBURY PARK, LONDON,
ENGLAND. II.

Sometime ago I gave some notes on Finsbury Park, London, accompanied with two photographs of the park itself. I now send two more illustrations of the same park, but of different localities from those previously given. One showing one of the main walks by the lake, the other, a portion of the lake and the heavily Wooded Island. This and



AVENUE OF SHADE TREES, FINSBURY PARK, LONDON.

all the London parks have large areas devoted to recreation grounds.

It seemed to me to be the aim of the directors to make this the prominent feature, as it should be. How dispiriting it is in many public gardens here to come on the sign "Keep off the Grass" as is too often seen. It is true we have our parks where there are hundreds of acres in one, and where there are lots of grass, shade and room, and where people roam at will.

And this is what is wanted all the time, not so much numberless flower beds as a place where city folks can get a glimpse of the country. Finsbury Park struck me as being very much of a country place, if I may term it such. There was more of nature and less of art than in some other parks, as I recollect it. I think the illustration showing the number of persons occupying the benches gives a good idea of the popularity of the place. Note the pretty back ground of shrubs and the fine avenues of shade trees.

The shrubbery consists of golden elder, flowering currants, cotoneasters, spirea opulifolia mixed with alaternus, hollies, aucubas, euonymus, bays, and many broad leaved evergreens which will not stand our more severe winters. I have forgotten whether the large shade trees are planes or poplars, but I noted when there, one of the nicest avenues of our native Carolina poplar I had ever seen. They

were planted a row each side of a road. Here this tree grows too rank, as everyone knows, but with less heat, it was an ideal tree at Finsbury, seemingly in the way, too, to be a more lasting tree there than it is here. The building shown at the end of the road is one for refreshments, where ample supplies of everything is kept, with courteous waiters to bring it to the tables.

The island and lake view is a pretty one. What a lovely peaceful scene it is! The declining sun throws the shadow of the trees well across the lake, and to be near it, whether on the water or on land, as evening comes on, gives a pleasure the recollection of which lasts for many a year.

"Oh! to see it at sunset when warm o'er the Lake
Its splendor at parting a summer eve throws,
Like a bride full of blushes, when ling'ring to take
A last look of her mirror at night ere she goes."

The water is particularly pleasing to the visitors to these parks, and it is not often I should say that the photographer could have shown such a comparatively clear sheet as he has done in this case. The English are fond of the water, anyway, and the goal of many an English boy's ambition is to "get a berth on board the Victory."

As I mentioned in my previous letter, no boats are permitted to land on the island. It is thickly planted with trees, evergreen and deciduous, and it has such a cool, enticing look of a hot summer's day that the desire to land is great. One could al-



THE LAKE, FINSBURY PARK, LONDON.

most select the beautiful spot and say with Byron:

"Oh! that the desert were my dwelling place,
With one fair spirit for my minister,
That I might all forget the human race,
And, hating no one, love but only her!"

I find that I must bring my notes on Finsbury to a close, but I hope in the near future to give you some on Battersea, another London Park, in another part of London.

Joseph Meehan.

ST. GAUDENS' STATUE OF GENERAL LOGAN,
CHICAGO.

The impressive bronze equestrian statue of General John A. Logan, unveiled in Chicago in July with most imposing public ceremonies, is the latest work of Augustus St. Gaudens, whose successive artistic productions have undoubtedly served to make him the greatest of American sculptors and a man of genius.

By common consent the Logan statue is pronounced a masterpiece, and well may Chicago congratulate herself on possessing two such diverse examples of the highest sculptural art as the Lincoln monument in Lincoln Park, and the Logan monument in Lake Front Park, and both by the same artist. And the latter is the first equestrian work of the sculptor, and the largest production of its kind in America.

The site will eventually be an ideal one. The statue rests on what is practically a mausoleum, for by act of legislature the remains of both the General and in due course Mrs. Logan will rest therein. This structure of brick is concealed in a mound of earth rising nineteen feet above the level of Michigan avenue, and the granite base of the monument

proper rises still five feet above this. It was designed by Mr. Stanford White, and its concave upper member, decorated with bronze wreaths encircling names of battles in which Logan took part, gives a most chaste and classical finish to the oval base. The lowest granite course, oval in plan, is 27 feet north and south by 35 ft. 5 in. east and west. From the base to the top of the horse's withers is 11 ft. 3 in., to the top of the general's head is 15 ft. 11 in., and to the top of the upraised flag over 23 feet. The entire statue weighs 14,200 pounds. It was cast in bronze by the Henry-Bonnard Bronze Co., of New York City.

The motive of the work was a martial figure. As Mr. St. Gaudens says: "To that end I concentrated my energies, and everything else was subordinated to that idea. I wished to present a figure that would embody the highest type of the warrior; one of fierce, indomitable energy and fiery patriotism, such as General Logan is known to have been. If I have achieved that end, it is that I have produced those characteristics of General Logan which were brought out in striking effect in the inci-



EQUESTRIAN STATUE OF GENERAL JOHN A. LOGAN, CHICAGO.

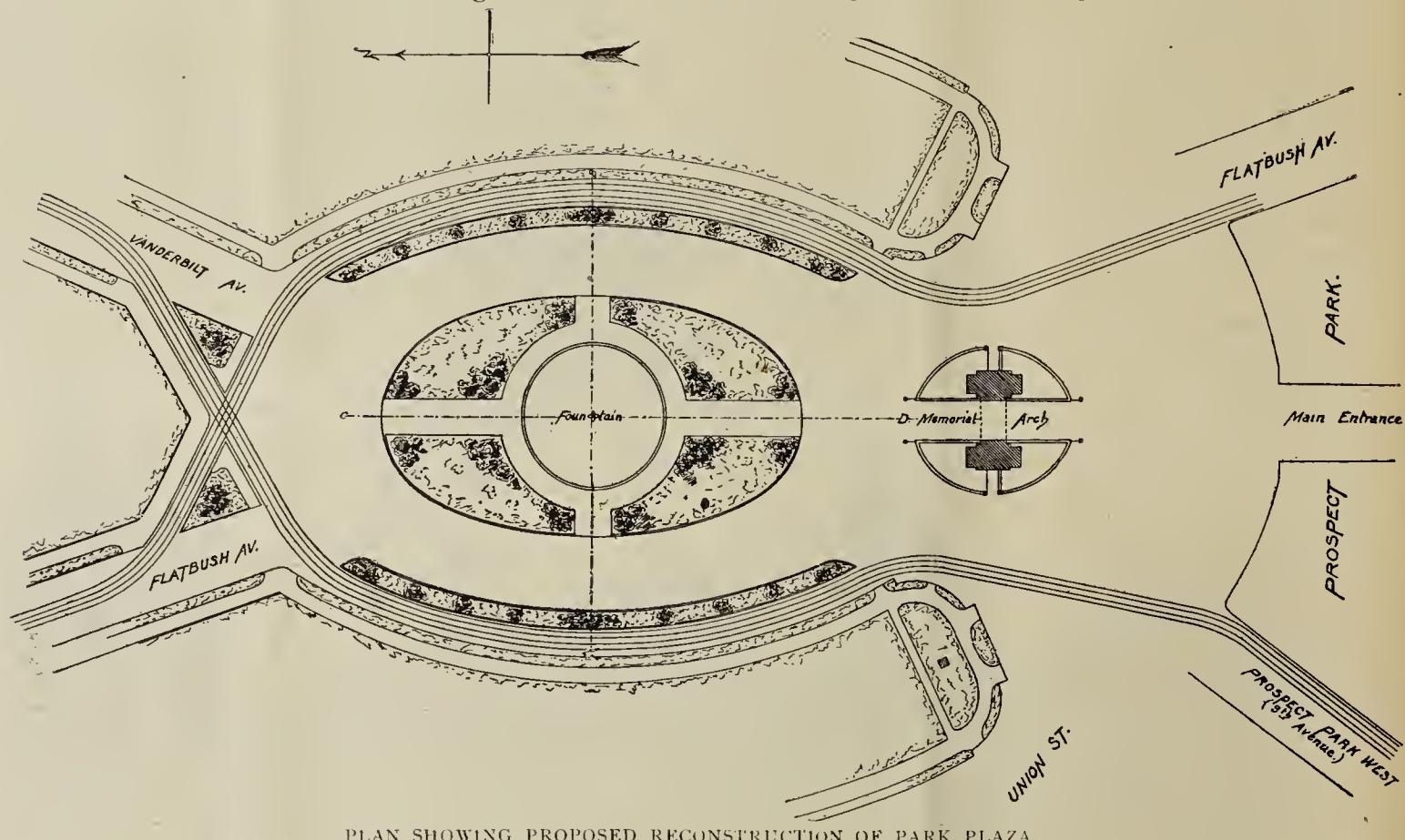
dent before Atlanta, which is illustrated in the subject."

It would seem to be like sacrilege to suggest a criticism on such a noble work, and there can be none worth considering of the rider, whose pose and every feature depicts the momentous occasion that the artist memorializes. It is to the pose of the horse and its form that exception must be taken, if we would have that perfect harmony that should exist in an equestrian statue. The pose and appearance do not seem to harmonize with the dashing and anxious moment so vividly expressed by the attitude of the rider.

PROSPECT PARK, BROOKLYN.

Very few of our large public parks have as yet attempted to combine architectural and sculptural features to emphasize any certain portions of their systems, although ultimately such a course will in many cases, from an artistic standpoint, be necessary, in order to create harmonious relations between such portions and the adjacent city development, especially with regard to entrances.

Prospect Park, Brooklyn, a park of wide reputation, besides its delightful landscape effects, of such varied design and expression, has for some years been developing its entrances, and particularly the Plaza at the intersection of Flatbush and Vanderbilt avenues. The illustrations given herewith,



PLAN SHOWING PROPOSED RECONSTRUCTION OF PARK PLAZA.

for which we are indebted to the Department of Parks of Brooklyn, give some idea of these improvements, but do not show the proposed statuary. A magnificent Quadriga designed to crown the Soldiers' and Sailors' Memorial Arch, by MacMonnies, bronze reliefs for the panels, already in place, and eagles to surmount the columns, will before long occupy their respective stations, and further additions to the monumental features are under way.

The original landscape design of Messrs. Olmsted, Olmsted & Eliot, which included considerable mounding and a fine fountain to break the monotony of the flat entrance, has had to give place to a rearrangement to harmonize with the design of the

huge arch, and the northern end has been changed in accordance with further plans of that firm. The street car tracks have been relaid so as to present their least objectionable features and at the same time afford the public the greatest convenience. When completed the Plaza entrance will be one of the finest, if not the finest park entrance the country possesses, and will afford a magnificent approach to the natural beauties opening up in all directions.

Other entrances of the park are receiving attention, and in due time will be made attractive. The Third street entrance will be embellished by American panthers in bronze, modelled by A. P. Proctor, to surmount pedestals of beautiful design.

Turning to the landscape features we give an

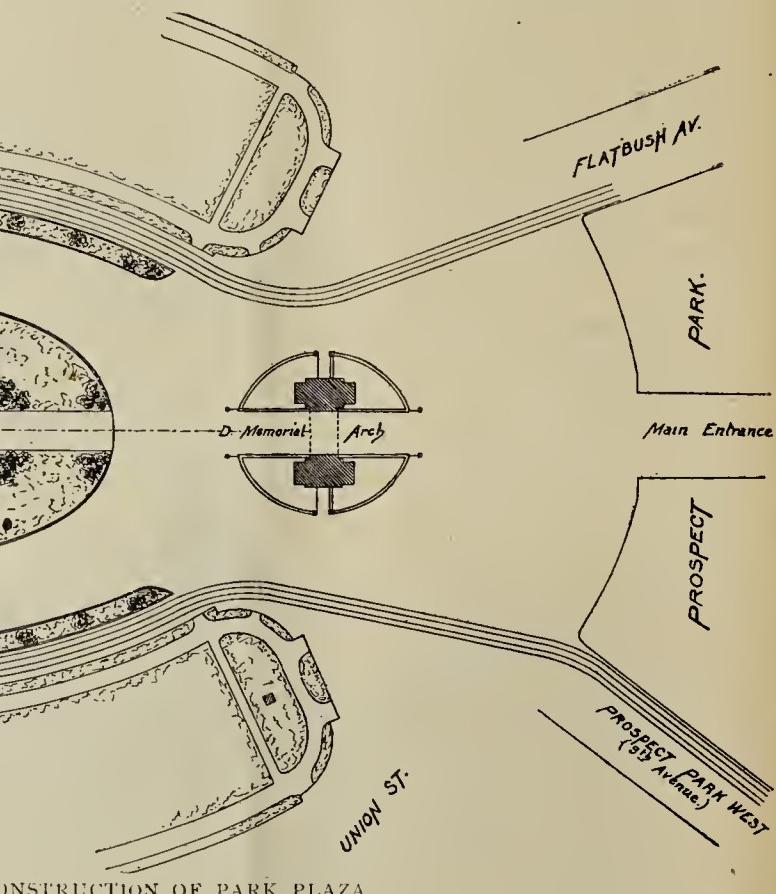
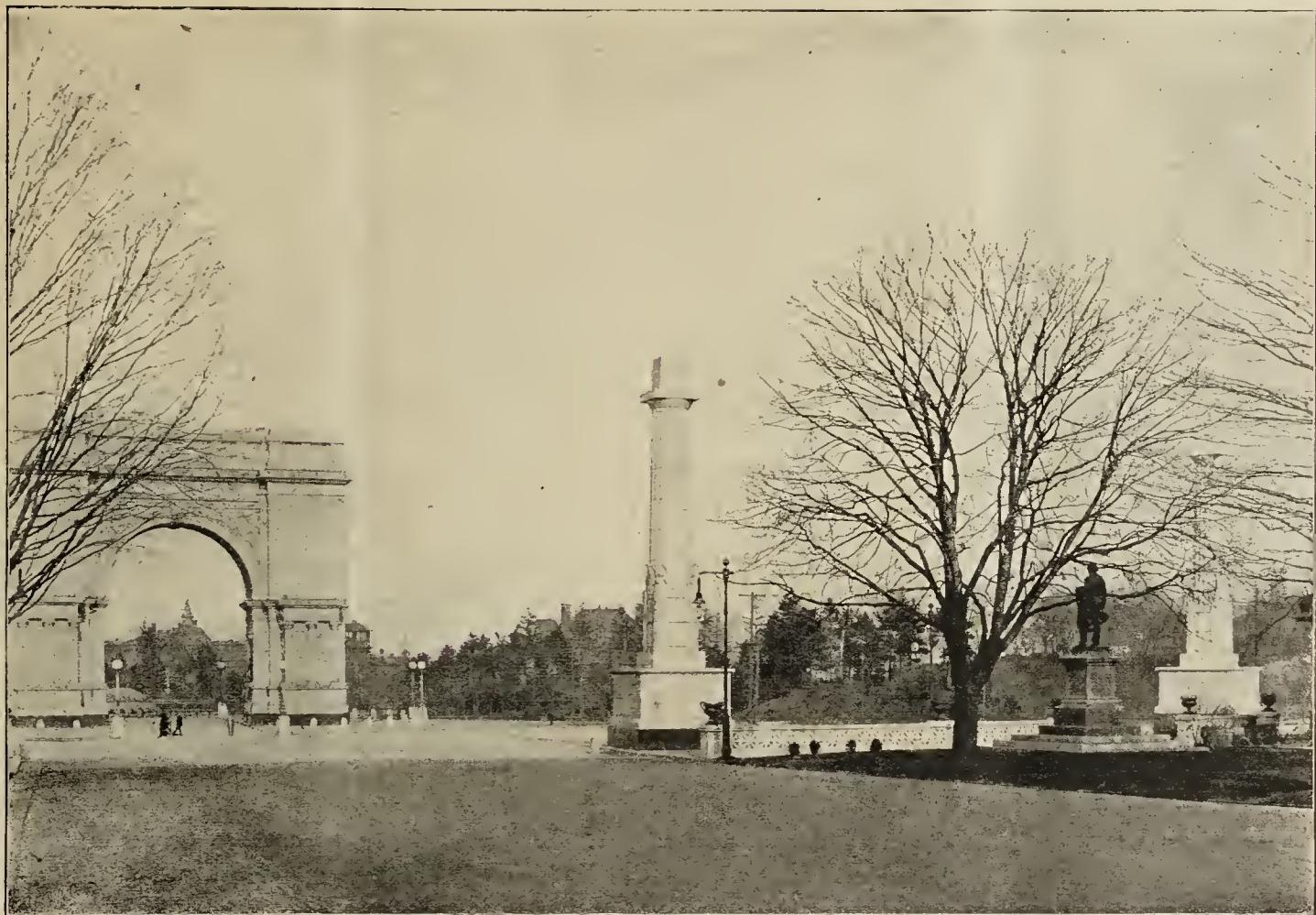
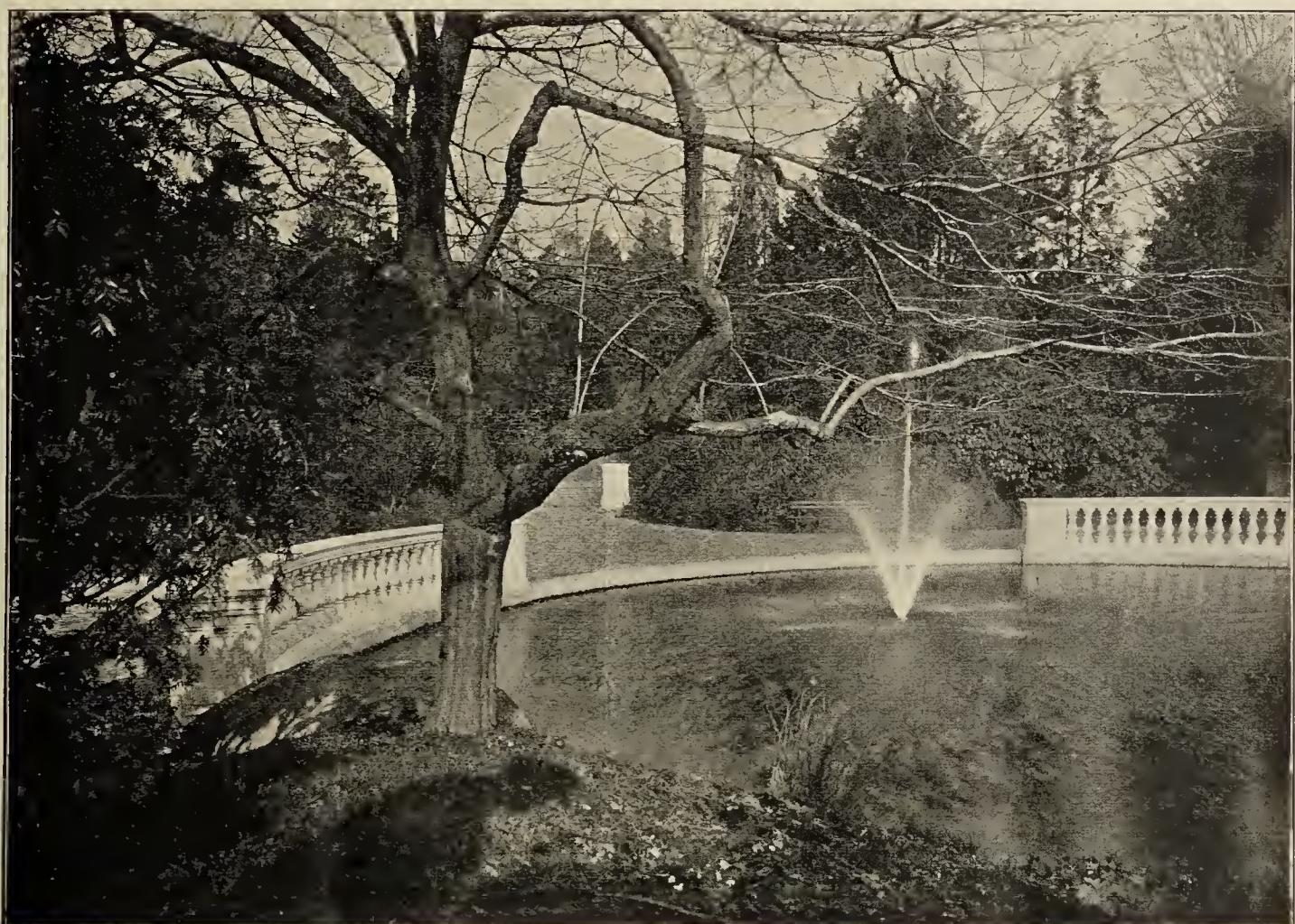


illustration of the fountain in the Vale of Cashmere, a beautiful and attractive spot, where the combination of rustling foliage, charming flowers, dropping water, and the glistening marble balusters seen amidst shrubbery, is beautiful to a degree.

Especial pains have been taken by the authorities to provide accommodations for the different classes of patrons, in their several ideas of amusement. The cyclists have been liberally provided for, as well as the devotees of other games and athletic exercises, while shelter houses and other public conveniences of appropriate and handsome designs and substantial construction tend to make Prospect Park a well developed public resort, and a pride to the city of its creation.



MEMORIAL ARCH, LOOKING FROM MAIN ENTRANCE OF PROSPECT PARK, BROOKLYN.



THE FOUNTAIN IN THE VALE OF CASHMERE, PROSPECT PARK, BROOKLYN.

LAKEWOOD CEMETERY, MINNEAPOLIS, MINN.

Lakewood Cemetery, Minneapolis, Minn., was laid out when Minneapolis was in its infancy.



counted not to exceed 5,000. Minneapolis is now a city of two hundred thousand inhabitants and Lakewood cemetery has kept full pace with it in growth and development, having been transformed from a virgin forest to a beautiful burial park and continues to be one of its chief ornaments and most beautiful resorts.

The original cemetery site comprised eighty acres of rolling land lying between Lakes Calhoun and Harriet and cost \$20,000. This area has been increased by purchase and exchange until at present the total area is about 200 acres. In the summer of 1872 a portion of the ground was platted, and on Sept. 16th, of that year the dedication took place. Years before a band of Sioux Indians had used the northwesterly portion of the grounds as a permanent camp or village, and a number of our citizens still remember the fact. The grounds are well within the city limits of to-day and are accessible by three lines of street cars, as well as being directly on two of the most prominent parkways of the city. The superintendent's residence occupies a beautiful corner directly across from the main entrance to the cemetery and is entirely outside and separate from the grounds proper. All the barns, sheds, etc., are also outside the grounds and thus one source of dirt and litter is removed.

During these first few years of the cemetery's existence the sales were light and the burials few, but at present Lakewood buries about twenty-five per cent. of all the people who die in Minneapolis, averaging about six hundred per year, and has the larger share of the cases sent here by railroad from outside points. During the first ten years the total burials were only eleven hundred; the total number to date being 9,400 of which thirteen hundred are buried in single graves.

The plan adopted for the improvement of the cemetery was what is now known as the lawn plan. Strict rules were adopted for the management of the grounds, fences and hedges were prohibited around lots, and the promiscuous planting of trees and shrubs was discouraged. It was also decided that the posts set to designate the lot corners should not project above the sod level.

For a few years the care of his lot was left optional with the lot owner, but in 1882 it was decided to place the entire grounds under general care and the price of lots was raised sufficiently to insure a fund to meet this extra expense. Prices at present range from fifty cents to a dollar and a half per square foot, the average sale price varying from year to year. One-fifth of all money received from lot sales is required by statute to be placed in the hands of trustees to provide for the maintenance of the grounds when all other sources of revenue shall have ceased. The principle on which the Association is conducted, is that all monies received shall be devoted to the maintenance and improvement of the grounds.

Of the two hundred acres owned by the Association about forty acres are unavailable, being too low and swampy for burial or else surrounded entirely by swampy lands; the remainder is beautifully wooded land and about eighty acres are under care at present. Along the entire front of the



SHELTER LODGE AT STREET CAR ENTRANCE OF LAKEWOOD CEMETERY, MINNEAPOLIS, MINN.

grounds there is a strip varying in width from 75 to 200 feet which is reserved as a park or ornamental piece and which will probably never be sold for burial purposes.

When platting the sections into lots, a grass border of at least four feet is always left between the drive and the front line of the lot; in this space the water and drain pipes are laid, thus obviating the necessity of tearing up the roadways for repairs and connections, save when crossing from one sec-

which are transplanted to the nursery and after a year or two planted out permanently in the grounds. Success has attended the planting of shrubbery, and it has done away to a great extent with the necessity for show beds and has reduced the annual bill for flowers to a small amount. Quite a number of annuals are raised in hot beds and cannas are started in the same manner.

From about November 15th, to April 1st, there are but few burials made at Lakewood, the heavy snows and deep frost making it exceedingly difficult and unpleasant to open graves and attend funerals. All bodies brought to the cemetery during this time are taken to the chapel, which is heated and ready for use at all times, and where the concluding portion of the burial service is conducted the same as it would have been at the grave. After the departure of the friends, the cemetery employees take charge of the remains and lower them into the vault, where they are numbered and registered for identification and burial in the spring. The receiving vault has a capacity of about five hundred bodies, but so far not more than 325 bodies have been cared for in one season.

At the annual meeting in 1895 the Board passed a rule prohibiting mounds over graves, this has been strictly enforced and is accepted without question.

Lots in section 14 (the latest platted) are sold only with the proviso that but one stone, (the monument) may be erected above the sod level, all grave marks being set level with the ground, and no flowers to be planted except in vases.

Nowhere in the grounds are tombs allowed to be built except in the hill side, which is reserved for this purpose.



ENTRANCE TO RECEIVING VAULT, REAR VIEW OF CHAPEL.

tion to another. The water pipe is laid only six inches below the surface and follows the contour of the ground. At every low place a drip valve is put in, by means of which the system is thoroughly drained in late fall when the frosts become severe.

Owing to the lack of a perfect system of drainage it has been found necessary to sink catch basins in the sand in numerous places and allow the surface water to drain into them and seep away through the sand. By cleaning these frequently, this system answers fairly well and will be continued until such time as a more perfect one is found.

The water supply comes from two connections with the city mains, and from a well in the low ground, from where it is forced by wind power to a 52,000 gallon tank on the highest point in the grounds. The windmills and tank will supply sufficient water for use except during the extreme hot weather. At present the water is used exclusively for care of lawns and flowers and sprinkling the drives, but the plan is to have eventually several small lakes or pools, which will draw from the same sources.

Fortunately the grounds are naturally wooded, the native trees being red, black and burr oak, linden, ash, elm, hickory and hard maple on the high ground, while the birch and tamarac cover the low places. There are also growing wild large numbers of thorns, dogwoods, high bush cranberries, snow berry, hazel, red berried elder and other shrubs



A VIEW IN LAKEWOOD.

We are indebted to Mr. Arthur W. Hobert, superintendent, for the particulars concerning Lakewood, and for photographs from which the illustrations are produced.

GARDEN PLANTS—THEIR GEOGRAPHY, XXII.

MYRTALES.

THE RHIZOPHORA, MYRTUS AND ENOTHERA ALLIANCE.

(Continued).

The beautiful Barringtonias, the singular Napoleonas and many others follow, and then come the



DISSOTIS INCANA.

Rhexia is a genus in seven species from our own country and other parts of North America. They are handsome enough, but rarely seen in gardens. They seem to do best in sandy, swampy places.

Sonerilæ and *Bertoloniæ* contain beautiful foliage plants, too tender in most cases for northern outdoor gardens. There are shrubby Sonerilas growing at considerable elevations, but in moist, warm, sheltered places, which I think would do well under north walls during summer. A set of beautiful hybrids have recently been obtained between species of these two tribes, called Bertonerillas. Medinillas and a host of other fine plants follow, of use outdoors in northern gardens only for a month or two, during the warmest weather.

Cuphea has 150 species, mostly from sub-tropical parts of America; one species, *C. viscosissima*, extends northwards to New England, and another is found on the Sandwich Islands. A few of the tender kinds are grown chiefly as summer bedding plants.

Lythrum has twenty-three species and several selected garden varieties. They are widely distrib-



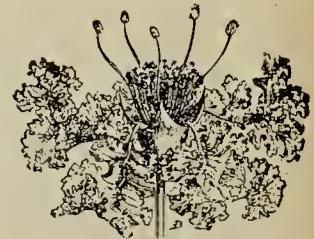
LAGERSTRÆMIA INDICA.
WITH FULL-SIZED FLOWER SEPARATED FROM THE PANICLE.

uted over the world—in fact, almost cosmopolitan. Two species are found in Britain, mostly in marshy or damp places. *L. salicaria* is naturalized in the United States; the other, an annual in several forms, is indigenous both here and in Europe. Four or five of the best are in cultivation, and are showy summer flowering perennials.

Lagerstroemia, "Crape Myrtles," have twenty-one species from sub-tropical and tropical parts of Asia, Australia and Madagascar. *L. Indica*, in three or four varieties, including magenta, pink, and white, form handsome shrubs or small trees at the south, and will often endure Delaware winters for several years. In fact, I have known them



BERTONERILA VAR.
A BI-GENERIC HYBRID



frozen to the ground in Central Pennsylvania and yet grow up again from the root, and flower during the succeeding August. They are well worth cellar or shed room in winter, and may then be kept cool and dry, planting them in the ground, if possible, before growth commences. In this way they may be grown to a good size northwards, and will flower abundantly.

Punica, the pomegranate, is regarded as a somewhat anomalous genus. It is a well-known plant, formerly cultivated more commonly than now. It stands on walls in the vicinity of



EUCHARIDIUM BREWERI, AND GARDEN VARIETIES OF OENOThERA.

London, and remains evergreen there, as seems to be its nature. At the middle south it grows to a good size in some varieties, ripens its fruit, but becomes deciduous. The pomegranate is East Indian, but has been cultivated in all warm countries, and varied a good deal.

Epilobium, "willow herbs," have sixty species, distributed over the temperate regions of the earth, with several species extending to regions that are rather *intemperate* in climate at times. About twenty species are found in the United States, half of which are northern. About the same number are cultivated in the best botanic gardens. The one most commonly seen is *E. augustifolium*, common to all extra tropical parts of the northern hemisphere. It grows to six or eight feet high in gardens, varies somewhat from shades of purple to white, and produces its flowers in fine, long terminal racemes, which endure for a long time in suitable climates. *E. hirsutum* is the British "codlings and cream," naturalized in Canada and the New England States. *E. luteum* and *E. obcordatum* are grown in gardens, being about all of our native kinds so honored. In suitable soils these plants spread greatly, and are best in beds that can be mown around.

Zauchneria Californica is a monotypic plant

growing to two or three feet high, and with flowers whose structure resembles the former genus, but with a colored calyx, axillary scarlet flowers, and projecting styles like fuchsias, some of which it resembles in habit. It has endured northern winters now and again with protection.

Fussiaca and *Ludwigia* contain a few large flowered aquatics southwards.

Clarkia has five species and several garden varieties of Californian and Western States annuals, some of which are double. They are a good deal grown and appreciated in Europe, but less commonly in the Atlantic States, whose climates in some hygrometrical or other particulars often seems but ill adapted to the perpetuation of Pacific coast plants.

Oenothera (including godetia), "evening primrose," are in 100 species of annuals and perennials, which are most likely all temperate American. Local botanists have credited them to the mountains of India, Tasmania and to Britain, but they are almost certainly adventive. (*E. biennis* is or used to be abundant in some places on the western coast of England, and was included by Lindley in his synopsis of the British Flora as a native, but there seems to be traditions of its introduction during the reign of Charles I. It is also sung by British poets, just as though it belonged to them. They



FUCHSIA—GARDEN VARIETY.—From Gardening.

are often beautiful plants and in varieties of their yellow, white (and in the Godetia section), lilac,

rose or purple flowers are by no means all evening primroses—"hermit like, shunning the light, wasting their blooms on the night." Many keep open all day, especially in shade.

Eucharidium, in two species and a variety or two, are pretty garden annuals, with purplish flowers. Where they do well they are worth attention.

Fuchsia has fifty species, mostly South American and Central American, but with two or three species in New Zealand. The little creeping *F. procumbens* is one of these latter, and should be tried as a rockwork plant at the south. Of the South American kinds *F. Riccartoni*, a garden variety, is deemed the hardiest kind, and endures the winters in Scotland, but generally as a herbaceous plant. *F. globosa* is grown in the same way; so also is *F. macrostemma* (better known as *coccinea*). In the southwestern counties of England and in some parts of California the garden varieties and several good species do well and form handsome large plants. On the

FUCHSIA TRIPHYLLA.

mountains of India, too, and in parts of Australia, *Fuchsias* grow to perfection, forming bushes which are marvels of beauty. In the Atlantic States they are forbidden fruit, except as greenhouse plants, and here and there as bedders under north walls during summer. One or two florists have, I believe, tried to winter the hardy kinds outdoors. On the southern mountains they may succeed if cut down and covered about Christmas with a pile of pine needles or sawdust.

Lopezia has fifteen Mexican and Central American shrubs and herbs, some of them rather pretty, but hardy only in climates such as California.

Gaura has twenty North American species. *G. Lindheimeri*, a Texas plant, is the only one much seen in cultivation. It has spikes of pink and white flowers.

Trapa is a genus of floating aquatics in two or three species, common to Southern Europe, Africa and Asia. They yield eatable nuts, and *T. bispinosa* is, I think, hardy at Washington, D. C. The natives of the northwest provinces of India use this



species for food, and Dr. Royle has somewhere recorded that a Rajah of Cashmere levied taxes to the tune of \$60,000 annually on the 120,000 assloads passing through his famous valley.

The plants are singular, and their seed vessels more so, the species named above having two spines or horns projecting from the seed vessel, which looks for all the world like the model of a Bison's skull.

Trenton, N. J.

James MacPherson.

Among the plants which grow spontaneously on the surface of the moors of Portugal, of Spain, of Sicily, and in all the north of Africa, there is found a long-lived graminea, the products of which, scarcely known in France, except perhaps in the south, are on the contrary, greatly appreciated in other countries. In Spain they give it the name of Spanish grass, but it is more frequently designated by that of halfa, from the Arabian term. Not only is the leaf of this plant transformed, by processes comparatively simple, into a paste for paper of superior quality, but it is also employed in a number of uses, either in domestic economy or in navigation. There are made from it cordage, nets, artificial horsehair, sacks, mats, or rush matting, objects of the basket trade, and even stuffs and tapestries for rooms. In considering it alone from the point of view of the production of paper, this textile plant can be the source of considerable profit for those who undertake its cultivation. Rags becoming more and more rare, the use of this paste for paper becomes more extended every day. In a financial statement made not long ago in the House of Commons in England, Gladstone spoke of it as follows: "No one can form an idea of the multiple usages to which this paste lends itself. It is, so to say, under all forms possible. With it anatomists make artificial limbs; other artisans use it to make telescopes; it is employed in making dolls and combs." At the universal exposition in 1878 there were seen door panels in paper of halfa, and even carriage wheels. Who, then, can place limits to the industry of this plant, when we see India rubber, so supple and variable by nature, become after several preparations harder than wood? On the high plateaus of Algeria, and in Sicily and Tunis, halfa is being cultivated after fixed methods. Two and a half acres produce a ton of leaves, which are sold for \$22 at the port of embarkment. In botany halfa is known by the name of *lignæum spartum*.—Emily Windsor in Chicago Inter Ocean.

* * *

A London paper claims that teak is the most desirable wood known for structural and mechanical purposes. It is hard, yet light, easily worked, and though porous, strong and lasting. It is soon seasoned, shrinks little, and because of its oily nature does not injure iron. In southeastern Asia it is much used for shipbuilding. The wood is frequently girdled a year before it is felled, and thus exposed to sun and wind it seasons more rapidly than when cut green.

THE ROSTRUM, NATIONAL CEMETERY,
GETTYSBURG.

The one who visits the National Cemetery, Gettysburg, will wish to view the Rostrum, the vine-clad structure beyond the portion of the grounds dedicated to the interments, and towards the part of the field in which are the Round Tops. The illustration presented herewith well represents the vine-adorned structure. At the time of my visit I observed that, owing to some repairs which had been undertaken, the building had not an appearance as much in keeping with its surroundings as it has at other times. The rafters had been renewed, necessitating the cutting down of many of the vines, and the ivy had been cut from some of the pillars. Previous to this it had been, what it will be again in a short time, so vine embowered that not a vestige of anything artificial will readily be seen. At such times it must be a beautiful retreat. Public speakers occupy it on Memorial and other days. Some of your readers may think of the floor in connection with what I say that not a vestige of anything artificial is readily perceived. The floor is *sod*; beautiful green grass covers it, the inside to the height of the retaining walls having been filled in with soil and then sodded over. The retaining walls are thickly clad with English ivy of both the large and the small leaved kinds, with honeysuckle mingling with it. The ivy clings closely to the bricks; the honeysuckle does not, but forms a loose, bushy mass, which makes the whole covering much more natural looking than it would were the close growing ivy alone. The eight pillars are ivy clad, or will be again in a short time.

As will be seen from the picture, stronger growing vines have been planted to cover the roof. I call it roof, but it is simply what may be described as the joists of a floor covered with vines. It is a fair weather structure, not one to be used when it rains,

The vines are Wistaria and Bignonia. The repairing of which I spoke of had been undertaken recently, so that the vines, though growing strongly again, had not yet covered nicely the entire roof. When full grown and in good season, what a charm the flowers of the Wistaria must be in May and the Bignonia in August? These are splendid vines for large structures or for purposes such as used here, but sometimes out of place set alongside of small porches, a position they sometimes occupy.

The entrance to the rostrum is from each end, up a flight of eight stone steps. Looking south from the floor of this inclosure can be seen a large portion of the battlefield which lies between it and the Round Tops. On the other side is the sorrowful sight of

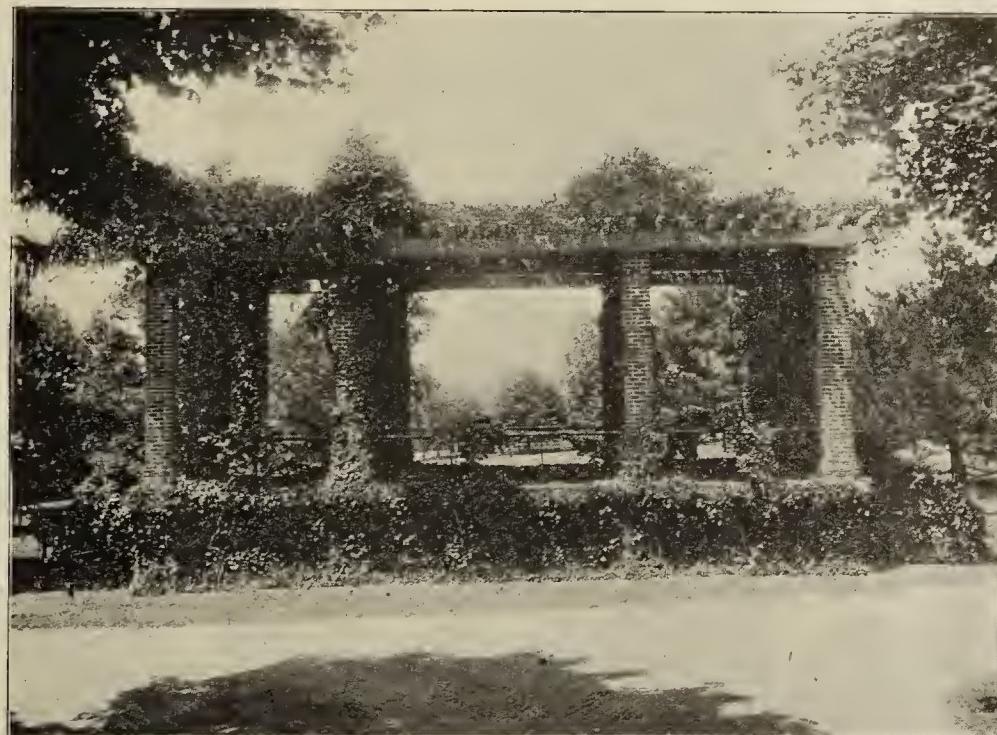
the battle. I say sorrowful, for though resting as they do, mid beautiful scenes, beloved by their living comrades and honored by a grateful nation, those brave men, though willing to risk their lives, *hoped* to live through the war and rejoin their dear ones.

How vividly this reminds us of the poet Gray's beautiful lines:

"For who to dumb forgetfulness a prey,
This pleasing, anxious being e'er resigned,
Left the warm precincts of the cheerful day,
Nor cast one longing, lingering look behind?"

To mention the trees displayed in the picture will interest many of your readers. Looking through the center of the Rostrum the shapely tree in the distance is a blood-leaved Beech. Between the pillars on the right is a native White Pine, and the heavy looking one on the right is Austrian Pine. On the left, though hardly distinguishable, are such sorts as Larch, Sweet Gum, Salisburia, Norway Maple, Cembran Pine, with many Retinissporas and other evergreens.

This cemetery, though overlooking a valley and itself occupying a place where was waged one of the fiercest contests of modern times, is to-day a



THE ROSTRUM, GETTYSBURG, PA.

PARK AND CEMETERY.

model resting place for the dead. Beautiful trees and shrubs embellishing historic ground, lovely green sward, neatly kept grounds, are all arranged to produce a pleasing, quiet picture. It is away from the town, and so inclosed with trees and shrubs that one is hardly prepared for the quiet scene within.

"You might have heard the rustling leaf,
The breeze's faintest sound,
The shiver of an insect's wing,
On that thick peopled ground."

Joseph Mechan.

THE CREMATORY, FOREST HOME CEMETERY,
MILWAUKEE, WIS.

The crematory at Forest Home Cemetery, Milwaukee, Wis., not long completed, is as may be recognized from the illustrations herewith given, one of the latest and most complete examples of the crematorium and accessories for this method of disposing of our dead by incineration. Profound study was given to the work by those intrusted with its installation, and a careful examination made of many plants already in operation, so that in many respects the latest ideas might be incorporated in the new work. The architects, Messrs. Ferry & Clas, in designing the work have throughout sought to impart an attractiveness to the various apartments in use, so as to create as cheerful an aspect as possible to all the details of the ceremony.

The crematory occupies the basement of the chapel shown in the illustration, and which has been before described. It consists of three rooms and a hallway leading to them. The waiting room and hallway are situated under the chapel, and the furnace and preparing room under the conservatory, the floor of which has been made perfectly water tight.

The walls of the hall and the waiting and preparing rooms are of pencil veined white Italian marble in slabs reaching from the ceiling to the floor and carefully matched. The floors are mosaic of a simple design to harmonize with the classical ornamentation in the rooms, which is on the Corinthian order. The ceiling of the preparing room is deeply paneled and handsomely ornamented. In the center of alternate panels are electric lamps that light the room and are reflected on the marble walls.

On one side of the preparing room is a handsome fireplace, and on the opposite walls are the two retort doors. One is the door of the retort in operation, and the other waits for a second retort should an addition become necessary. The preparing room is comparatively bare in its appointments, but the waiting room is supplied with attractive furniture.

Every detail has been carefully worked out to insure both durability and attractiveness, and whatever comfort may be derived under such circumstances from inspiring surroundings.

The furnace itself embodies the latest improvements connected with the generation of the high temperatures required in incineration, as well as the preservation of a structure having to sustain such extremes. It is constructed of high class fire brick



CHAPEL AND CREMATORIUM, FOREST HOME CEMETERY, MILWAUKEE, WIS.

specially molded and laid so exactly that no destructive strain occurs from the alternate heating and cooling of the furnace. The plan provides air spaces and other expedients in the walls to prevent the radiation of heat to the exterior. To obviate all suggestions of active operation, both the oil for the burners which is supplied under hydraulic pressure, and the compressed air to effect the spraying of the oil when burning are piped underground from a considerable distance where the operating devices are located.

The furnace consists of two chambers, one above the other. The upper one is the retort in which the bodies are incinerated, and the lower one the combustion chamber in which the gases from the retort are consumed. The burners in the retort, three in number, are arranged along one side near the

top of the chamber, so that the flames do not strike directly upon the body. The secondary burner in



PREPARING ROOM, CREMATORY, MILWAUKEE.

the combustion chamber is placed at one end, so that its flames shoot down the chamber and across the openings from which the gases from above are received.

The flues for carrying the gases from the retort are arranged along one side at the bottom of the wall and under the row of burners previously described, the design being to keep the gases swirling and prevent their too rapid escape into the combustion chamber. In the lower chamber the same swirling is kept up to consume the gases as completely as possible. The fumes pass through a series of openings between the bricks of the chamber floor into the chimney flue, and the openings

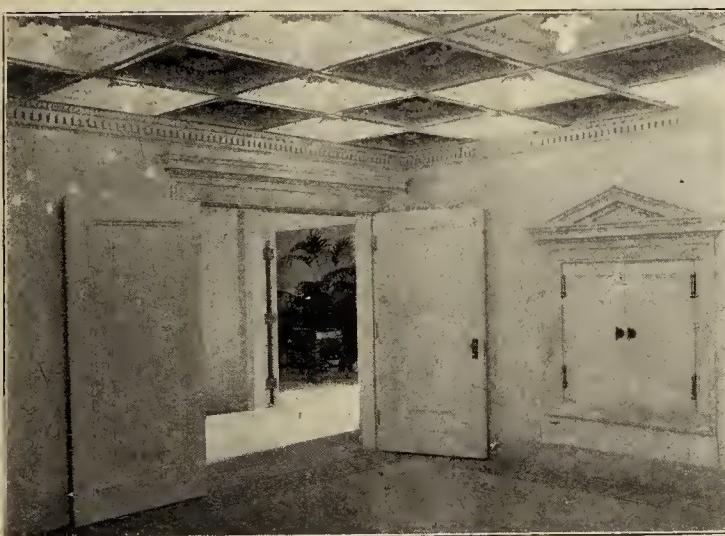
The lighting of the rooms is effected principally by electricity, but two small windows filled with colored glass admit light from the outside and create some spectacular effects in the illumination.

The services and routine adopted in the carrying out of an incineration have already been described in these columns, and they vary little except in detail at the several crematories of the country. The effort on the part of those intrusted with the establishment and operation of a crematory is to secure conditions the least harrowing and suggestive to the mourners, and to approach as closely as



RETORT ROOM, CREMATORY, MILWAUKEE.

possible to an ideal consignment of departed man to the realms of nature.



VIEW FROM PREPARING ROOM, SHOWING RETORT DOOR AND WAITING ROOM.

have been so arranged as to prevent any considerable volume of smoke or gas escaping at any single point. The drafts can be so regulated that incineration can be accomplished without a particle of smoke issuing from the chimney.

FORESIGHT IN GARDENING.—One of the misfortunes of garden lovers is that they frequently plan to do more than can be carried on successfully. Almost every one who builds a house thinks he would like to have a nice garden, and the nice garden is consequently arranged. But when it is found, as it too often is found, that it requires a number of men, running up an expensive salary bill, to keep the place in good order, what was expected to be a pleasure becomes an annoyance and a bore. A small place well cared for and everything kept nice and orderly gives far more satisfaction than an overgrown place that is a drag on the means of the proprietor. We know of a number of places, beautifully designed in the first instance, and which require some half a dozen hands to care for properly, dragging along with only one regularly employed, with perhaps an assistant, and even the money for this grudgingly bestowed. There is no comfort in seeking pleasure in this fashion. In all our operations we are too apt to think we can do more than we really can. In gardening matters, it is especially so.—*Meehan's Monthly for July.*

* * *

Sig. Crispi has had his own monument erected in a Naples cemetery. Its only inscription is "Crispi."

SOME NATIVE PLANTS.

With the wealth of native herbaceous plants, shrubs, and vines, we are certainly not compelled to resort to exotics for beautifying our parks; in fact, with the native trees,—and of course we would not dispense with these,—indigenous flowers seem more in harmony.

Many of them, contrary to the prevalent notion, are easily transplanted, and speedily adapt themselves to their new surroundings with a spirit in direct variance with their seeming delicacy and modesty. While as a rule it is advisable to follow nature's course in selecting the location for each individual, there are cases in which a change in soil proves even beneficial. Thus the beautiful cardinal and meadow rue, which never voluntarily stray far from the brookside, increase in size and luxuriance on being transplanted to rich dry soil, yet lose not a whit of their peculiar grace.

One of the best autumn bloomers, and happily one most easily established, is the Closed Gentian, (*Gentiana Andrewsii*) the flowers of which do not open, but retain the semblance of buds until they wither. It is a comely plant throughout the entire season, with smooth, glossy, ovate leaves. But in late August, when the flower buds form and the foliage takes on the first purplish tinge, which, as the buds mature, seems a reflection of their own rich hues,—then the plant commands special attention. Its color, always intense, varies somewhat even on the same plant as the season advances, and while Thoreau has been criticised for describing it as "a splendid blue," there are certain stages in its development when only an artist's eye would detect any inaccuracy in the description. Certainly few blossoms display in their short life so many distinct shades of color,—all clear and intense.

This plant also furnishes an interesting study in insect life; for while its corollas do not open, the bumblebees have learned how to rifle them of their sweets. The writer has on more than one occasion watched with interest their repeated efforts to thrust their proboscis between the folds of the floral curtains, their evident satisfaction on forcing their head and nearly the whole body into the cup, and the resulting discomfiture when an exit is attempted,—for the valves of the corolla close at once over the downy visitor. But alarm vanishes with escape, and the bee at once seeks the heart of a sister flower, carrying with it pollen and thus aiding nature in her great plan of cross fertilization.

The wild indigo is another comely plant easily transplanted. Though herbaceous, its tall stalks assume a shrubby aspect, it flowers freely and persistently through mid-summer, when there is a comparative dearth of wild flowers, the latest blossoms kissing those of the earliest gentians in their fare-

well, and their yellow pea-shaped blossoms contrasting in a most pleasing manner with the blue-green, genista-like foliage and rounded seed-pods. This plant would speedily gain friends by its peculiarly attractive foliage, though destitute of flowers.

Our native columbine is ornamental among shrubbery or in rocky places, and happily adapts itself to almost any situation, increasing rapidly from seed self-sown. *Bessie L. Putnam.*

THE DUTIES OF A GARDENER.

The following is from the introduction to Horace Walpole's (1801) edition of "Whateley's Observations," and may be profitably read by the members of Park and Cemetery boards always.

"Gardening, in the perfection to which it has been brought in Britain, is entitled to a place of considerable rank among the liberal arts. It is as superior to landscape painting, as a reality to a representation: it is an exertion of fancy, a subject for taste; and being released now from the restraints of regularity, and enlarged beyond the purposes of domestic convenience, the most beautiful, the most simple, the most noble scenes of nature are all within its province; for it is no longer confined to the spots from which it borrows its name, but regulates also the disposition and embellishments of a park, a farm or a riding; and *the business of a gardener is to select and to apply whatever is great, elegant, or characteristic in any of them*; to discover and to show all the advantages of the place upon which he is employed; to supply its defects, to correct its faults, and to improve its beauties.

For all of these operations the objects of nature are still his only materials. His first enquiry, therefore, must be into the means by which those effects are attained in nature, which he is to produce; and into those properties in the objects of nature, which should determine him in the choice and arrangement of them.

Nature always simple, employs but four materials in the composition of her scenes, ground, wood (plants,) water and rocks. The cultivation of nature has introduced a fifth species, the buildings requisite for the accommodation of men. Each of these again admit of varieties in their figure, dimensions, color, and situation. Every landscape is composed of these parts only; *every beauty in a landscape depends on the application of their several varieties.*"

Public opinion in Paris having compelled the park department to withdraw a concession for a bicycle track in the Bois de Boulogne made to the Prince de Sagan, as soon as the Prince began to cut down trees, the courts have refused the Prince damages for the loss of the concession.

* PARK NOTES. *

The late James Aram of Delavan, Wis., bequeathed \$20,000 for a public library for the town, in memory of his daughter.

* * *

Miss Abbie A. Bradley, Hingham, Mass., the daughter of the late William L. Bradley of fertilizer fame, has donated \$20,000 to Harvard College, the income of which is to be devoted by the Director of the Arnold Arboretum to the purpose of increasing by scientific investigation the knowledge of trees. Mr. Bradley was greatly interested in trees and this donation is an exemplary and wise memorial by his daughter.

* * *

The park commissioners of Wabash, Ind., have decided to construct a hitching rack, 150 feet long, to which to tie horses, a drinking fountain built of boulders, of attractive and substantial design, and other improvements in the city park. These have been much needed, and the hitching rack will tend to save many of their trees from injury and destruction. The hitching rack will have to convey the idea of penalty for failure to use it instead of the trees, to make it serve its best purposes.

* * *

The village improvement society, of Nahant, Mass., is proving itself to be a most wide-awake organization, and although but a few months old the effect of it can be seen in all sections of the town. Its committee on roads recently submitted a report to the citizens in relation to the feasibility of introducing an electric railroad to connect the town with Lynn, and the committee express themselves very strongly against anything of this kind. It is claimed that the summer residents pay eight-twelfths of the taxes, and to put in a railroad means the driving of many of these taxpayers to other places. This is one of the principal arguments in the report. The matter is being freely discussed by the townspeople, and lively times are anticipated at the special town meeting, about to be held, called to take action on the question.

* * *

In connection with the park system of Indianapolis, Ind., bonds for \$350,000 have been issued. This was supposed to provide for all the expense incident to it, but as soon as purchases of ground were made it was found assessments were to be placed on adjacent property to pay for the park lands. People living along the land thus selected question whether their property would be benefited by the proximity of a public park, and many believe it would be a detriment. An injunction brought the proceedings to a halt, but it is understood the scheme will be carried out if the courts finally sustain the law. It would seem that considerable education is yet necessary for Indianapolis in the matter of public parks. The city is behind the times in such matters, and should hasten rather than retard such important public improvements.

* * *

Workers in the field of endeavor to elevate the masses in Chicago, and there are many prominent citizens engaged in the laudable work, have established a play ground for children in one of the most thickly populated tenement districts, largely of Polish nationality. In this district, the sixteenth ward, there are 166 people to the acre with 30,000 minors, and there is a crying need for small parks. Very few of the buildings have any spare ground in front or rear. The people of the neighborhood show a hearty appreciation of the boon, and the police in charge give very favorable reports of the behavior of the children. The need of small parks in such neighborhoods was never better illustrated than by this example of practical benevolence, which

has been carried out under the auspices of the Northwestern University settlement. It is a suggestion to the city authorities.

* * *

The Regents of the University of California, at Berkeley, Calif., are studying a magnificent scheme, architectural and landscape, for the future of the university. Its location is beautiful to a degree, its area of 245 acres rising quite abruptly from its level campus to a height of some 900 feet on the foothills of the coast range. Already rich in endowment and state grants, its has assurances of donations of many millions of dollars to secure the results contemplated, which are in a word to rival the World's Fair in Chicago in architectural features, and in landscape art its diversity of contour renders it amenable to the most picturesque effects. It has been decided to invite international competition for the general plan to aid the best results of which the most complete data will be prepared. Mrs. Phoebe Hearst will defray the entire cost of preparing for the competition.

* * *

The Philadelphia Board of Education out of an appropriation of \$3,000 was able to equip twenty-two playgrounds for children this summer. The idea was put in practice in 1895, with four grounds, and it was productive of so much good and happiness that eight more were added last year, and ten more this year. As compared with former years, the playgrounds have been much better equipped with toys and games. In a number of yards swings and seesaws have been introduced, and teachers and janitors have devised games or furnished material for elementary manual work in certain directions. Increased shade has been provided. The sandpiles are larger, and in each playground comfortable seats for mothers have been placed. These playgrounds are situated in the more densely populated portions of the city, and many of the playgrounds have a distinctive race character. At one the majority of children attending are Italian; at another Russians or Polish Hebrews. The general daily attendance in the playgrounds runs from about 300 to 600, according to the location. Many of them are largely patronized by mothers with their babies.

* * *

Eve Brodlique gave an interesting article in a recent issue of the Chicago *Times-Herald* on fascinating Clovelly, that hill-side Devonshire fishing village, long the residence of Canon Kingsley, and which figures so much in "Westward, Ho!" She says: "Visitors slip painfully upon the elementary steps, and the round-bodied donkeys, untrammelled with rein or harness, but with panniers slung on either sleek side, climb zig zagging up and down with unhurried motions. We move along the fascinating place, and turn to look up. It is like a narrow canon fringed by the queerest houses that ever lined a street. The whitewashed cottages have their fronts frescoed with climbing ivies, wisteria, clematis jackmanni and nasturtiums all abloom, and wonderful in size and color. Great tangles of marigolds and fuchsias, masses of pink and yellow roses add strong notes of color, and over the little green palings of one white cot is the vivid coloring of a great laburnum bush in blossom. A jessamine drops star-shaped snow upon the pebbly ground, and masses of honeysuckle shed fragrance like manna. Virginia creepers and hydrangeas filled one garden and house front, and another house, made an arbor by jessamine, geranium and nasturtium, had a queer little dormer window which was suddenly pushed forward by impatient young hands, and the golden head and fair face of a Devon maiden appeared simultaneously with the arrival of a handsome fisher lad at that portion of the street. It was a pretty enough picture. Youth and age, and youth a-loving! We discreetly turned away." It takes time to create such beauty spots, but everything must have a beginning.

PARK AND CEMETERY.

CEMETERY NOTES.

Mr. Charles H. Frederick of Ardmore, Pa., has been awarded the contract for grading, macadam and masonry for the Chinese Cemetery on St. Mary's Farin, at Wynnewood, Pa.

* * *

There are no undertakers in Japan. When a person dies it is the custom for his nearest relatives to put him into a coffin and bury him, and the mourning does not begin until after burial.

* * *

Work has been begun on the enlargement of the cemetery connected with the P. E. Church of St. James the Less, at the Falls of Schuylkill, Philadelphia, Pa. The total cost of the improvements will be about \$12,000.

* * *

The Wilmington and Brandywine Cemetery Company of Wilmington, Del., are contemplating making extensive improvements to their cemetery at an early date. Plans are being perfected for an entrance and a superintendent's house.

* * *

The Union Cemetery Association, Kansas City, Mo., is defending a suit for \$3,558 special tax bills for sewer construction. The defense is a clause in its charter exempting it from taxes. Judge Slover upheld this contention in a similar case recently, but a motion for a new trial is pending.

* * *

The mayor of Madison, Wis., recommends a large increase in the appropriation for Forest Hill Cemetery. The present labor force, the mayor thinks, is quite inadequate to the work expected of it, and he believes that the city can well afford to spend a little more in the care of the cemetery, which, he says, would be only a slight testimony of the public's regard for the last resting place of the dead.

* * *

The annual report of the Catholic Cemetery Association of St. Agnes, Utica, N. Y., has been printed and distributed in pamphlet form. The receipts from sales of lots amounted to \$3,142.40, and from burial permits \$1,266. There was paid for labor \$1,809.75, salaries \$1,100 and flowers, shrubs and trees \$143.16. Additional land has been purchased, and the association is in good condition.

* * *

The care of St. Mary's burial ground, Albany, N. Y., situated on Washington avenue, has been placed in the hands of Supt. Judson of St. Agnes' Cemetery. This change is an assurance that the grounds will be well cared for. Supt. Judson has put an assistant in charge, and will inaugurate improvements which will make the place attractive and in harmony with the modern ideas of cemeteries.

* * *

An action has recently been commenced in the Common Pleas Court, Philadelphia, Penna., for damages by a lotowner in a local cemetery, who, having purchased a lot in 1889 for \$45 and having paid upon the same all but \$6.50, went to decorate the grave in 1895 to find the body of his mother removed, since which time he has been unable to find it. What the outcome of the case will be is yet to be learned.

* * *

The State Cemetery at Austin, Tex., has finally been turned over to the ladies to improve and beautify, and it will not be long before this silent city of the dead, where repose the re-

mains of Albert Sidney Johnston and other heroes of the "lost cause," will present a far different aspect from that which it now presents. The ladies who have taken part in this work are the Albert Sidney Johnston Chapter, Daughters of the Confederacy, assisted by the Daughters of the Republic, throughout the State. Major Mobley, superintendent of public buildings and grounds, will advise them on the landscape details.

* * *

A very commendable act in connection with our smaller cemeteries was that of Mr. L. Wahle of Davenport, Ia., who surprised the members at the annual meeting of the West Davenport Cemetery Association by offering to contribute \$500 towards a water supply for the cemetery. Water supply is one of the most important and yet most difficult of attainment in many small cemeteries owing to its costliness. In our latitude, however, it is absolutely necessary if the cemetery is to be kept up to a standard condition of appearance, and Mr. Wahle's example is one of the most encouraging and suggestive in its usefulness.

* * *

The annual report of the trustees of the Canandaigua, N. Y., Cemetery Association on Woodlawn Cemetery gives the total receipts to June 1, 1897, including balance from last report, \$4,129.63, and disbursements \$4,012.13. The receipts included: Sales of lots, \$2,220; opening graves, \$255.75, and foundations, \$313.75. The disbursements included: Services and labor, \$1,588.14; expenses, \$385.32, and payment of indebtedness, \$1,600. Total receipts since organization in 1884, \$52,679.89. Total cost of cemetery grounds, improvements and personal property to June 1, 1897, \$52,561.39.

* * *

The vestry of the Episcopal Church at Benicia, Cal., refuses to permit the remains of the missionary, Dr. James Lloyd Breck, to be moved from that church without a money consideration. Before Dr. Breck died, Bishop Nicholson states, he made arrangements for the burial of his body, and his will directs that the remains be buried under the chancel of a church to be built at Benicia. This church, Bishop Nicholson says, has never been built, and will not be. The church beneath which the remains lie was erected as a temporary edifice, sadly dilapidated and in need of repair, and the grave is neglected. The alumni of Nashotah, Wis., have agreed to defray all the expenses attached to the removal of the remains to Nashotah, and will, after the reinterment, erect a handsome monument over the grave, but will not contribute a cent to the thrifty vestrymen, who virtually are attempting to sell the remains of the missionary.

* * *

A memorial cross has recently been placed in Mount Auburn, over the urn containing the ashes of Kate Field. The urn was committed to the earth by the side of the graves of her father and mother, and a brother who died in his childhood. The place is a beautiful one, on high ground, with overarching elms waving in the air. It has been my sad and sacred privilege, says Lilian Whiting in a Chicago exchange, to take charge of this last earthly tribute to the gifted and lovely woman whose ashes there repose, and I designed for it a cross of the purest white Italian marble, with the name, Kate Field, in raised letters on the short arm of the cross. It is placed on two pediments, and on the upper of these—of the same marble—there is inscribed the lines: "Spirits are not finely touched but to live issues." And on the reverse (all being in raised letters), "Pax Vobiscum." There is nothing else on the memorial. Nothing more is needed. In her biography, which I am to have ready for the publisher in the spring, all the details of that beautiful and noble life will be given, and many of the letters written to

her from the Brownings, George Eliot, the Trollopes, Landor, and many others of the most famous and interesting people of the age. Her life was a more remarkable one in all its inclusiveness than has, perhaps, been realized even by those who most loved and appreciated her exquisite genius and lofty character.

* * *

The City Comptroller of Camden, N. J., last month refused to allow the Camden Cemetery trustees to spend \$500 for an iron fence around the burial grounds while the money to their credit in the City Treasury is needed to pay interest on the cemetery bonds.

* * *

The Mary Custis Lee Chapter, Daughters of the Confederacy, have secured funds for improvements in Lexington Cemetery, Lexington, Va. It will be inclosed on the front and on half of the north side by a substantial wall four feet high, eighteen inches thick, and with a stone coping two feet broad, which will be built of native limestone in ashlar masonry.

* * *

The Woodmere Cemetery Association, Detroit, Mich., has received from the ordnance department of the U. S. A., through Secretary of War Alger, two two-ton howitzers and eighty shells the shells weighing about fifty pounds each and measuring eight inches in diameter. The cannon will be placed at each end of the G. A. R. and U. S. military plats in the cemetery, while the shells will be made into four piles and placed in front of the two lots which adjoin each other.

India-rubber is being experimented upon as a material for street paving. It was first tried on a bridge in Hanover, Germany, a little more than a year ago, and has proved so satisfactory that further experiments with it for ordinary roadways are being made in Berlin and Hamburg.

* * *

The G. A. R. Post of Mercer, Pa., have received two cannons from the Brooklyn Navy yard, to be placed at either side of the monument to be erected in Warren's park in memory of Mercer county's fallen heroes. The work on the monument will probably be completed in October.

The Rural Cemetery, St. John, N. B.

The progressive development of our own cemeteries very early attracted the attention of the officials of the Rural cemetery of St. John, N. B., and it has frequently been mentioned in these columns. The following descriptive notes on its policy and progress written by Mr. H. L. Spencer will be interesting.

"The Saint John Rural Cemetery Co., was incorporated by an act of the New Brunswick legislature of March 30, 1848. The capital of the company was \$15,000. The site chosen contained 110 acres of land, about one and one-fourth miles eastward from the city, bounded on the north and south by the Marsh and Westmoreland roads. A more picturesque situation could not have been selected anywhere in the vicinity of the city nor one better adapted for cemetery purposes. Much of its surface, which is diversified by hill and valley with several springs and running brooks, was originally covered with a growth of evergreen and deciduous trees, and much of its soil is of a gravelly nature and the facilities for drainage, where necessary, are excellent. Eight or ten drinking fountains in different parts of the ground are supplied with water from Loch Lomond, ten miles distant. M. Stead, one of the most distinguished landscape gardeners in the province, supervised the improvement of the grounds for many years and all of the principal avenues and paths were laid out under his direction. Their utility and picturesqueness furnish a substantial monument to his discernment and skill. There are now some twenty miles of these, the avenues being from twenty to thirty feet and the paths from six

to eight feet in width. Several miles of drains from five to six feet in depth have been laid and are under construction. A few years since Mr. J. R. Ruel, president of the company presented the cemetery with a beautiful drinking fountain in memory of his wife and the construction of an artificial lake, a chapel and a shelter house are under consideration. Within two or three years many lots subject to perpetual care have been sold and many more have been placed under annual care.

The effect is that lot owners generally give more attention to their holdings and the appearance of the cemetery is greatly improved. Sixty six lots were sold last year and the total receipts were \$6,597 61. The list of proprietors of lots now numbers nearly 3,000, and the number of interments to date is in the vicinity of 18,000. During the last five years the grounds have been enlarged by purchase to about 170 acres and have been greatly beautified by the planting of a large number of imported trees and shrubs adapted to this climate. Probably nowhere else on the continent can finer specimens of roses, pansies, rhododendrons and hydrangeas be found than in the Rural cemetery in their season, and in consequence the place has become the favorite resort of thousands of citizens, especially on Sunday afternoons, all through the summer months.

Should all of the improvements that are projected by superintendent J. P. Clayton, to whom the public is largely indebted for the restfulness and beauty of the place, the Rural cemetery will soon have no peer among the burial grounds of Canada. Many beautiful monuments have been erected during the last year, one of which, manufactured from granite found recently at Westfield, near the city, is greatly admired. The stone is nearly black, takes a beautiful polish and appears as if sprinkled with a dust of silver."

The lightest known solid is said to be the pith of the sunflower, with a specific gravity of .028, or about one-eighth that of cork. The sunflower is extensively cultivated in central Russia, and various uses are served by its different parts, the recent discovery of the lightness of the pith essentially increasing the commercial value of the plant. For life-saving appliances at sea cork has a buoyancy of one to five, while with the sunflower pith one to thirty-five is attained. About 800 cubic inches of it would weigh as much as one cubic inch of iridium, the heaviest metal.—*The American Machinist*.

* * *

A correspondent in *The Garden*, of London, uses a steam lawn mower, of which the following particulars are given: It is much easier to work than an ordinary horse. It is very simple and not at all unwieldy, the engine and boiler being fitted on the top of the large or main roller. The machine is nicely balanced and can be turned with more ease than a horse machine. The boiler is composed of a series of copper tubes, and a copper fire box, and the pressure carried is 300 pounds. Water is fed to the boiler by a pump at a temperature of 180 degrees. Ordinary petroleum under a pressure of about 15 lbs., is used as fuel, burned in the fire box through a burner like a naphtha lamp. There is little odor and scarcely any smoke when working. The cost of working is something more than 2 cents per hour, and it will run 6 hours on its oil supply. It does about double the work of a horse machine in a given time. The 30 inch machine of the writer weighs some 1,500 lbs. It can be used for pumping water, and makes an excellent roller, besides other purposes.

Association of American Cemetery Superintendents.

G. W. CREESEY, "Harmony Grove," Salem, Mass., President.
 ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., Vice-President,
 F. EURICH, Woodlawn, Toledo, O., Secretary and Treasurer.

Publishers' Department

Park Commissioners and Cemetery trustees are requested to send us copies of their reports.

Photographs and descriptive sketches of interesting features in parks and cemeteries are solicited from our readers.

The attention of our readers is called to a series of articles by Mr. O. C. Simonds on Residence Streets, the first of which appears in this issue. The subject is a timely one, in view of the interest awakening in art out-of-doors, for the treatment of our residence streets, in anyway approaching an artistic manner, has been a neglected factor in our urban development. The series of articles now begun will be a valuable contribution to this phase of landscape gardening, and will include the planning and planting of streets, illustrated in such a manner as to convey a clear understanding of the points discussed and to stimulate a more wide spread desire to beautify the environments of our homes.

Thanks.

PARK AND CEMETERY takes pleasure in thanking the Henry A. Dreer Co., Philadelphia, for the special invitation to visit Dreer's Nurseries, Riverton, N. J., in connection with the Third Annual Excursion of Florists and Gardeners of Philadelphia, which occurred August 31st. It may be added that all accounts agree that the affair was an unusual pleasure and it received the warmest commendation from all participants.

RECEIVED.

Year book of the United States Department of Agriculture, 1896, Washington, Government Printing office, 1897. This is the third volume of this series issued and contains over 600 pages, and a large number of illustrations. It is one of the most valuable works issued by the government, containing as it does, a great fund of information on agricultural matters, collected from papers and reports of experts, investigators and the results of the works of the agricultural colleges. The papers are given more in the form of popular essays, containing all the authentic information which investigation develops but put in a style easily comprehended by the average reader. The appendix preserves in convenient form condensed statistics and

some valuable material in the way of recipes and directions in regard to horticultural practice.

Official Guide to Tennessee Centennial and City of Nashville. Nashville, Tenn.: Marshall & Bruce Co., 1897.

Mount Greenwood Cemetery, Mt. Greenwood, Chicago. Rules, Regulations; Information for Lot owners, etc.

History and By-laws of the Woodlawn Cemetery Association, Kansas City, Kansas. Illustrated with half tone engravings.

From Wm. F. Jewson, superintendent, By-laws and Rules of the Mankato Cemetery Association for the government of Glenwood cemetery, Mankato, Minn. Illustrated with half tones.

The Kensico cemetery, New York. Annual report to the Lot Proprietors for the year 1896, with Rules and Regulations. No expense is spared on this annual publication either on letter press or illustrations, and this the latest is far in advance of those issued previously. It is a good policy to expend liberally on printed matter.

Lakeside Cemetery of Buffalo, N. Y. Beautifully illustrated pamphlet of this new cemetery, containing description, rules and regulations and full particulars regarding lots and facilities.

U. S. Department of Agriculture. Farmers' Bulletin, No. 28. "Weeds and How to Kill Them." Lyster H. Dewey, Assistant Botanist.

University of Tennessee, Knoxville, Tenn. Register 1866-97. Announcement 1897-98. The college was founded in 1794, and as the University of Tennessee, it has just issued a prettily illustrated brochure, entitled: "A Century of a College."

CATALOGUES.

General Catalogue No. 27. The Kilbourne & Jacobs Mfg. Co., Columbus, O. Manufacturers of Drag and Wheel Road Scrapers. Bolted Wheelbarrows of all kinds. Contractor's Railroad and Grading Plows; Tubular Steel Dirt, Mining, Foundry, Coal and Coke Barrows. Contractors Railroad and Farm Dump Carts. Wrought Steel Sinks. Pressed Steel Shop Pans. Pressed steel shapes a specialty.

Fred'k. W. Kelsey, New York. No. 39. Autumn of 1897. Selected Hardy Trees, Shrubs, Bulbs and Plants for Fall Planting.

Fruitland Nurseries, Augusta, Ga., Catalogue No. 1, 1897. Fruit and Ornamental Trees, Roses, etc. P. J. Berckmans, Proprietor.

THE WATER GARDEN, embracing the construction of Ponds, adapting natural streams, Planting, Hybridizing, Seed Saving, Propagation, Building an Aquatic House, Wintering, Correct Designing and Planting of Banks and Margins, together with Cultural Directions for all Ornamental Aquatics. By William Tricker. Published by A. T. De La Mare Printing and Publishing Company, Ltd. New York. Price \$2.

This quarto volume, which by the way, is illustrated with nine plates, eighteen full page views and numerous other cuts in the text is intended as a practical handbook for the cultivation of Aquatic plants, whether for large establishments or for the

amateur. The name of the author William Tricker, so well known everywhere in connection with the cultivation and propagation of this class of plants for the comparatively new horticulture the "water garden," gives a value to the work in a practical sense. Beyond this the assistance which is acknowledged in the preface lends an added assurance that the enthusiasm which has attended the cultivation of the beautiful water lilies and associated plants, and which has so rapidly made the work popular, combines to endorse the publication as opportune and as a desirable and needful guide to the further development of water gardening. The book is full of practical detail and the illustrations from actual photographs of plants and gardens, help to an understanding of the requirements and treatment necessary to success in the cultivation and disposition of this beautiful class of plants and the establishment of large or small water gardens.

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We acknowledge our indebtedness to that admirable magazine of landscape art, "PARK AND CEMETERY," of Chicago, for the beautiful views on our first page that have given us the text for our article on "Rural Cemeteries." It is a monthly, replete with good things from the pens of the most able people in our country, who devote themselves to "art out-of-doors." —Michigan Fruit Grower and Practical Farmer.

John Boyle O'Reilly's Grave.

The memory of John Boyle O'Reilly still lives. The grave of the poet in Holyhood cemetery, at Brookline, constantly bears floral emblems, mute testimony of a lingering affection, says the Boston *Globe*. The ample burial lot, which is 88 by 40 feet in extent, is located in the handsomest spot in Holyhood. It is planted with Irish grass, while the red shamrock and the beautiful Irish daisy grow round it in profusion. The lot is shaded with shrubbery transplanted from the poet's native land. Among the trees are golden cedars, from Newton Ards, county Down; Irish junipers, Irish yew trees, rhododendrons and many young Irish purple beeches. The beds beneath the shrubs and trees are studded with a wealth of pansies and forget-me-nots. Nature herself, however, has given O'Reilly his most appropriate monument in the tremendous rock springing from the ledge underlying his burial lot. This huge pentagonal mass of stone, springing 12 feet in height, and weighing about 75 tons, represents better than any work of art all that O'Reilly's life and nature meant. His face implanted in the rock makes as complete an emblem of remembrance as could be desired. The 100 ivies from Louth castle, the poet's native home, planted three years ago, together

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with the two ivies from the grave of Martha Washington, have clambered around the rock in mingled profusion, giving the boulder the appearance of a huge green bush. The poet sleeps beneath a luxuriant floral bed a few feet in front of the bronze medallion, and at some distance from his grave two bronze vases are to be filled with palms and flowering plants of all kinds. The scenery around the grave is very attractive. Open, wooded and rugged, it recalls his intense love for the beauties of nature while the cultivated flowers in the burial lot brings to mind the poetic development which surrounded his later years. The face in the medallion is shown in profile. The shapely head, with close-cut hair, is firmly and gracefully poised on the shoulders, which is more than life-size, stands out from the medallion in prominent relief. It is altogether one of the most beautiful of graves.

A Guatemala Funeral Years Ago.

Mr. John L. Stephens, a traveler in Guatemala some years ago, gave the following account of a church burial, which he witnessed. Happily church burials are forbidden now: "The procession consisted of eight or ten grown persons and as many boys and girls. The sexton carried the child in his arms, dressed in white, with a wreath of flowers around its head. All were huddled around the sexton, walking together, the father and mother with him, and more than ever I remarked not only the absence of solemnity, but cheerful-



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ness and actual gaiety, from the happy conviction that the child had gone to a better world. I happened to be in the church as they approached—more like a wedding than a burial party. The floor of the church was earthen, and the grave was dug, inside, because, as the sexton told me, the father was rich and could afford to pay for it, and the father seemed pleased and proud that he could give the child such a burial place. The sexton laid the child in the grave, folded its little hands upon its breast, and placed across them a small rude cross. Then, having covered it over with a few inches of earth, he got into the grave and stamped it down with his feet; then he got out and threw in more dirt, and, going outside the church, brought back a pounder—a log of wood about four feet long and ten inches in diameter, like the rammer used among us by the paviors, and again taking his place in the grave, threw up the pounder to the full swinging of his arms and brought it down with all his strength over the head of the child. My blood ran cold. As he threw it up a second time I caught his arms and remonstrated with him, but he said they always did so with those buried inside the church—because the earth must be all put back and the floor of the church made even. My remonstrances seemed only to give him more strength and spirit. The sweat rolled down his body, and when perfectly tired with pounding he got out of the grave, more earth was thrown in, and then the father laid down his hat, stepped in and the pounder was handed to him. The child's body must have been crushed."

Cleopatra's Bones.

Where does Cleopatra's body rest? Scarcely a layman who would not answer, "Why, in Egypt." After her cajoleries,

her wiles, her life of intense if not very exalted loves, Cleopatra was laid in one of the loveliest tombs that have ever been fashioned by the hand of man. But what a change 2,000 years have brought about! To-day an ugly mummy, with an emblematic bunch of decayed wheat and a coarse comb tied to its head—a mere roll of tightly swathed dust—lies crumbling in a hideous glass case at the British Museum. It is Cleopatra, the once great Queen, a Venus in charm, beauty and love.

I found the following verse upon a tombstone in St. Clement Dane's Church, Strand, London, says Mr. William E. Curtis in the Chicago Record:

"Jacob Hemmet, 1595.
While social converse shall our cares be
guile
The vivid eye, the animated smile,
He will not be forgot by friendships few—
The world's ingratitude full well he knew.
A sanguine friend himself, too often he
Mistook profession for sincerity."

Near by the burial place of the unfortunate Mr. Hemmet there is imbedded in the wall of St. Clements a large and pretentious looking tablet, which records the fact, with a great many flourishes, that Richard Beddoe, who died in 1605, left £1,000 to the poor of the parish on the condition that the rector should preach four sermons yearly on the anniversaries of All Saints, the Purification, Michaelmas and Whitsunday on the beauties of benevolence, which would remind people to remember and give God thanks for the blessings they enjoy, and in these sermons it was stipulated that Richard Beddoe and his first wife, Anne, were to be mentioned as examples of benevolence and friends of the poor.

Immediately under this is another tablet, which records the fact that Margaret Beddoe, "the last wife of Richard Beddoe," died in 1616, and "by her will and testament added on £1,000 to the above benefaction, to be employed and disposed of as her husband's now is, provided her name is mentioned in connection with that of Richard Beddoe and Anne, his first wife, and at the same time."

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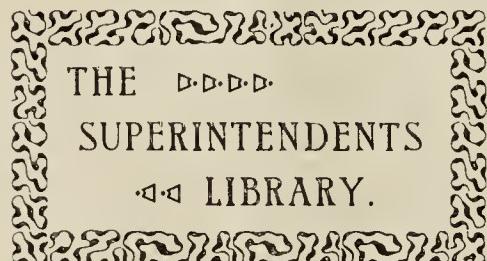


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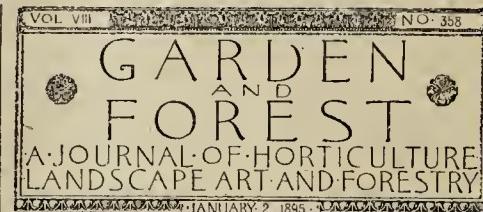
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CONTENTS.

EDITORIAL—ELECTRIC CARS IN CEMETERIES—THE FALL SEASON—THE NEED OF ART COMMISSIONERS	177
THE VALUE OF IMPROVEMENT	178
*RESIDENCE STREETS—II	179
GROUP OF CEMETERY SUPERINTENDENTS AT CINCINNATI—DR. LIVINGSTONE'S AFRICAN GRAVE	180
*TOMB OF THE ORLEANS FAMILY	181
*A VIEW IN RIDGEWOOD PARK, BROOKLYN	183
*DEPOT GROUNDS AT LAKE CITY, MINN.	184
*CEMETERIES IN THE OZARK MOUNTAINS	186
*OFFICE OF THE RIVERSIDE CEMETERY, CLEVELAND, O.	188
*A CHURCH IN RURAL ENGLAND	189
*GARDEN PLANTS; THEIR GEOGRAPHY, XXIII	190
A HALF HOUR WITH INSECTS, INJURIOUS AND BENEFICIAL	192
*THE LOVEJOY MONUMENT AT ALTON, ILL	195
PUBLIC GARDENS AND SQUARES	196
FALL FLOWERING SHRUBS	197
*A SIDE HILL VAULT	198
PARK NOTES	199
CEMETERY NOTES	200
PUBLISHER'S DEPARTMENT	202

*Illustrated.

WE confess to some leaning to utilitarianism in relation to some things so long as it serves our best interests and does not threaten the principles and ideas firmly established by precedent, custom and sentiment; but we think a line should be drawn against the admission of the electric trolley car within the precincts of our cemeteries. There is no doubt of its, to some extent, convenience, and its advocates undoubtedly bring many plausible arguments in the effort to convince of its advantages, but the cemetery is a sacred spot, which should be kept free of any and every suggestion of sordid business life. So far as our present civilization goes, it would seem altogether incompatible to expend so much effort and argument to bring about perpetual care and the development of the cemetery to the ideal of the Elysian fields, and at the same time open it to business opportunity under the plea of convenience. Neither the trolley poles, wires or car tracks should have any place *within* our cemeteries. These are sanctified by the presence of the dead, and the hallowed memories of the living; they are the holy ground upon which we should pass with reverence; within their confines untold lessons await the willing learner, and rest, peace and beauty are the handmaidens to wait on the intelligence that seeks the wisdom the modern cemetery imparts. Let us encourage all possible facilities without the walls, but let us not trespass on the sacred prerogatives within.

THE season is once more upon us which produces an entire change in our landscape effects, draws to a close the outdoor gardening work of the park and cemetery superintendent, and provides the needed rest for plant life. There is no actual rest, however, for the progressive superintendent; while rest, as far as the park official goes, is practically a thing of the past, and even for the cemetery superintendent who is keenly alive to the demands of landscape art, the fall provides ample opportunity for extensive preparations for the following year's improvements. For art out of doors has opened up such wonderful possibilities for beautiful effects throughout the entire year that just so long as frost keeps out of the ground the way is open for touching up the nature studies that the landscape gardener has provided in his planting out systems. The ever varying pictures always suggest a touch here or a little change there, and while the permanent features are such as will require years to develop to their prime, the details require constant attention and make nature's canvasses a continual delight to work upon. So that besides the business details of the superintendent's office in a modern cemetery, art out of doors requires an active intelligence pretty much throughout the year, for even the frost-bound weeks simply serve to divert thought from one activity to another. The public demand for winter recreation and sports in our parks nowadays necessitates the maintaining of a constant force of help, which keeps the superintendent actively employed, but yet he must find opportunities to keep pace with the development of his landscape, a never ending study.

THE need of a commission in every considerable city to determine upon its public monuments is a subject often discussed in these columns, and it is a subject which will admit of expansion to take in the public parks and their accessories, and, in fact, any other features of municipal improvement which calls for high professional skill to produce satisfactory results. For a long period of time the development of landscape art was confined to a few men of marked ability, but the great results they produced have neither been matters of general knowledge or general benefit, being largely confined to royal gardens and private estates. Their practical ideas have been copied and reproductions attempted here and there, it is true, but their works were exclusive in a certain sense. The rapid development along all lines, however, which distinguishes this epoch is not more marked in anything, perhaps, than in the demand for public parks and mu-

nicipal recreation and pleasure resorts, and this has created renewed interest in landscape art. But landscape art, in its true conception, demands as much ability, aptness, education and study as art of any kind, and it is in proportion to the possession of these attributes that work of the highest value may be expected from men professing it, and yet it is an unquestionable fact that the people have a right to the best. How to secure the best and so avoid the blunders of the past is the present day question in all departments of public art. The relegation of all such questions to a properly qualified commission whose decision shall be accepted as final, seems the best way of solving the problem, although recent attempts, owing to the unbalanced conditions of certain omniscient officials, have met with more or less discredit. Undoubtedly the appointment of competent commissions and a fair trial of the method will assure results far in advance of present examples. The recent controversy in New York City in relation to the buildings for the botanical garden at Bronx Park brings into a strong light the absolute unreliability of the so-called business man's dictum on problems involving art. The training of a business man and the training of the professional artist have practically nothing in common, hence the necessity in the public interest of calling for a decision on important questions from qualified sources, and that decision given, questionable and often interested officialism should not dare raise its voice. Mayor Strong's reported remarks concerning experts, which in this case included Prof. Sargent and Mr. Olmsted, leaders in their calling, not only belittled his office, but reflected upon his reputed business sense.

THE VALUE OF IMPROVEMENT.

I recently paid a visit to a pleasure ground in Pennsylvania which is attracting vast numbers of visitors.

It belongs to a traction company, and the profits are made by carrying people, and renting buildings for their refreshment and amusement. There is no charge for admission. The best orchestra in the country has been engaged for the season. There is a shady grove with the floor gravelled, and fitted with small tables. There is a fountain, capable of illumination, by electricity, but more conspicuous, and less a component of the artificial landscape than it should be. It supplies a lake, in a portion of which separated by a stone bridge, a collection of Nymphæs and Nelumbiums are planted. The superintendent's office at the entrance, and the bridge, are built of a dull red conglomerate. The other buildings of which there are several, are everything from shanties to Grecian temples, and of ma-

terial from brick with or without stucco, to variously fashioned wood. The lawns are in admirable condition, the drainage seems to be on an engineering scale, the roads far more numerous than necessary, and "keep off the grass" signs duly conspicuous.

The planting is rather thick for its future good, not as to the trees for a wonder, but in the more excusable shrubs.

Besides ourselves, out of all the thousands of people there, but one other was seen to take any close interest in it. Perhaps they had seen it before. Perhaps they saw at a glance that which we took pains to study and analyze, and find that every group was about the same. There were but four flowering shrubs at the time of our visit, large quantities of Hydrangea paniculata, a few Hibiscus Syriacus, two or three Clethra alnifolia, and a single Spirea. Some of these groups were enlivened by plants of Cleome pungens evidently added by the gardener. Otherwise every group was composed of ordinary nursery stock, and studded with 3 or 4 or 5 purple Prunus cerassifera, better known perhaps as Pissardi. The only variety was in the shape of the groups and the relative quantities of the constituents. They were few, and the result was a certain monotony which failed to hold the attention. But as if this were not enough, the spring-flowering shrubs were being sheared to an abominable dead uniform level, just as you may often see in flowerless monotonous nursery rows. It were better by far in a park to let nature run riot, than perpetrate such wretched work as this shearing. It is an infantile attempt at foliage bed neatness in the shrubbery.

On the opposite side of the highway is the now abandoned resort which first gave the locality a reputation. It is abandoned because the new property presents greater attractions, yet numbers who have time wander aimlessly over it, enjoying the dignity of its desolation.

The ground and the trees upon it are superior, and the lake in the concavity is far more natural and pleasing even without the artifice of a fountain. Such artificial planting as exists is wretched, formed merely to extend the shade, anticipating greater throngs of people. The maple trees were in wider rows like those of an orchard. They served however to accentuate the superiority of the more natural portions.

It was abundantly evident that a well advised company seeking a park in the locality could not pass such a property by. A little enquiry soon elicited the fact that they had appreciated it. They desired to buy it. The reasons are given below why they didn't. I have sought their verification di-

rectly from the party interested, but the stamp has been kept, and no reply vouchsafed. My informants story must therefore be taken for granted. It is not unlikely.

The Traction Company is said to have offered \$90,000 for the 22 acres of grove, lake, buildings, and toboggan-slide. The property was held at \$125,000 however, and now the proprietor has the mortification of sitting on his porch, and seeing thousands pass him by for the highly kept, lavishly improved, but naturally inferior grounds opposite.

It is impossible to say yet if the great expense of the orchestra will pay, but it is doubtful. It is certain however that minor attractions of a similar character do pay. It is equally certain also that sensible improvements on the ground pay, and pay well. It is evident that gaudiness in building, and monotony in planting fail to attract or please. They can be seen most anywhere.

Men delight in the colors and forms of nature, in their freedom, their new creations.

J. MacP.

RESIDENCE STREETS.—II.

DRAINAGE.

The underground drainage of roads is very important, but as it is simply an engineering question, which is fully treated in books on road making, it will not be considered here. The surface drainage is something that interests us whenever it rains or when the snow melts. It has been customary to locate catch-basins for receiving the surface water at street intersections. (See Fig. 3.) This arrangement causes most of the surface water from both streets to run past the crossings, making it necessary to depress the pavement, so that one must step down and up in going from one side of a street to the other, or else a passageway for the water must be made through the crossing. It may be said that a step down to the pavement and up again to the sidewalk at the street intersections is of no consequence, but it is really more elegant and satisfactory to have the walk practically continuous. With the catch-basin at the corner, the stoppage of the inlet, or a great fall of rain, sometimes covers the crossing with water so that one must either wade or go out of his way. With catch-basins placed in the centre of the blocks, or, if the blocks are long, at some distance from the crossing, the intersections can be kept relatively high and dry. Roadways are generally made crowning in the centre, so that water runs to the sides, but frequently the fall lengthwise of the roadway is less than it should be. City engineers are usually inclined to make the grade along the length of a street as nearly level as

possible. Authorities who have given the subject of roads considerable study recommend a fall lengthwise of not less than one foot in one hundred and twenty-five, nor more than six feet in one hundred. Such grades are not always feasible, but a certain amount of variation in level can usually be made in a residence street which will make it much more pleasing in appearance, and have certain practical advantages in keeping the street dry. The water is usually confined to the edge of the pavement by curbing which may be anywhere from four to fourteen inches high above the surface. This causes all the water falling on the roadway to seek the catch-basin and be wasted, excepting for its use in flushing the sewer. If the curbing, which is really unnecessary in most cases, were omitted, much of the



FIG. 3. SHOWING PORTION OF STREET INTERSECTION ON SHERIDAN ROAD.

surface water would soak into the ground between the sidewalk and the pavement, doing much good to trees, shrubs and grass. The roots of the trees naturally extend as far, or farther, than their branches, and for their good the ground under the pavement and sidewalk should be supplied with a certain amount of moisture.

The arrangement made for the removal of sur-



FIG. 4. SAME AS FIG. 3, WITHOUT CURBING AND STEP.

face water from streets must also take care of the surplus water from adjacent lots, so there is a practical advantage in having the level of the street lower than that of the ground adjoining. The appearance of houses and home grounds is also much better when they are higher than the street, and for this reason it is usually desirable to keep the latter as low as possible and give the underground pipes sufficient covering to protect them from frost. Where the ground is high and the sewers very deep the grades should, of course, be determined with refer-



THE CEMETERY SUPERINTENDENTS ON THE LAWN AT "OAKWOODS," THE RESIDENCE OF MR. HENRY PROBASCO, ON THE OCCASION OF THEIR VISIT DURING THE ANNUAL CONVENTION OF THE ASSOCIATION OF AMERICAN CEMETERY SUPERINTENDENTS, SEPTEMBER, 1897.

ence to surface conditions only. It sometimes happens that this general arrangement of the grades of home grounds, which is desirable on most accounts, causes water from melting snow to flow over the sidewalk in the winter time, where it may freeze and be dangerous for pedestrians. A slight depression of the lot away from the sidewalk and then an ascent toward the house would usually remedy this difficulty and also make the house appear higher. Sometimes, however, a pipe should be placed underneath the sidewalk to allow water to reach the street from inside of the lot line. The aim in surface drainage should always be to keep the traveled portions of the street in the most perfect condition for use. The quick removal of surplus water from sidewalks, crossings, and roadways will help to ensure this result.

O. C. Simonds.

Dr. Livingstone's African Grave.

The late E. J. Glave, in extracts from his journal published in *The Century* magazine some time ago, thus describes the tree in Africa, under which the heart of Dr. Livingstone was buried some twenty years ago: "Dr. Livingstone's heart is buried beneath a big tree called mowula, and by the Ilala mpundu. Although done twenty years ago, the inscription is in a splendid state of preservation. The tree shows no disfigurement, and, moreover, the carving is not on the bark, but on the grain of the tree itself. It is a hardwood tree three feet in diameter at the base; at thirty feet it throws out large branches; its top is a thick mass of foliage. When Livingstone died the heart and other viscera were buried beneath this tree, and the bark was cleared off for a

space of two and a half feet square; in this space Jacob Wainwright (whose account my discovery verifies to the letter) carved the inscription with no dunce's hand, the letters being well shaped and bold. The tree is situated at the edge of the grass plain, and is very conspicuous, being the largest tree in the neighborhood. It is about five miles southwest from the present site of the village of Karonga Nzofu, an important Bisa chief, whose father was a friend of Livingstone. Chitambo's is now ten miles away. It was originally near the tree; in fact, Livingstone died a few minutes' walk from the old village of Chitambo. * * * There is now no vestige of Chitambo's village standing—merely a big space covered with young timber. The Livingstone tree looks sturdy and healthy, and likely to last many years. I do not see how I can contribute to the future recognition of the place; metal, if I had it, would be stolen. There are no stones in the district to make a cairn. The tree will outlive any wooden cross I might erect. * * * In order to guide others to the exact spot, in case this tree should disappear from any cause, I selected another big tree likely to last many years, cleared away two and a half square feet of its bark, and in the space marked as follows: 'This tree is magnetic southwest of the tree where Livingstone's remains are buried, and is forty-five paces from it.' I brought away a bit of the bark of the memorable tree—a dead part, so as not to be guilty of vandalism. Livingstone's grave is in a quiet nook, such as he himself desired, in the outskirts of a forest bordering on a grass plain where the roan buck and eland roam in safety. When I visited the place turtle-doves were cooing in the tree tops, and a litter of young hyenas had been playing near by; in the low ground outside the hole leading to the cave were their recent tracks; they had scampered into safety at our approach."

TOMB OF THE ORLEANS FAMILY.

Dreux, the family tomb of the Orleans princes of France, recently opened (May 15) to receive the bodies of the Duchess d'Alencon, a victim of the charity fair horror in Paris, and the Duc d'Aumale, who died in Sicily from the shock of the Duchess' death, while less celebrated than Saint Denis, is nevertheless one of the historic tombs of France. The chapel originated with the Duc de Penthièvre, grand admiral of France, and grandson of the Count of Toulouse. Having lost his nine children, with the exception of a daughter, the Duchess d'Or-



THE ST. LOUIS CHAPEL.

MONUMENT OF THE ORLEANS FAMILY AT DREUX, FRANCE.

leans, at the transfer of his estate of Rambouillet to Louis XVI. the Duc transferred their bodies to Dreux, where they were entombed with their mother, the Princess d'Este, in the old collegiate church of St. Etienne. At his own death, in 1793, he was laid there with them. But a few years afterward a mob of the Revolution destroyed the church and desecrated the tombs, which had been placed in the choir. On her return from exile, in 1814, the Duchess of Orleans, mother of the future King Louis Philippe, undertook the task of recovering the remains of her family dead, and at the end of her painful search constructed, in 1816, upon the same site the mortuary building which her son afterwards enlarged, and the origin of which he wished to make prominent by the following inscription:

"Here, behind this marble, have been gathered in one tomb by the diligence of S. A. S. Louise Marie Adelaide de Penthièvre, dowager Duchess of Orleans, the mortal remains of the princes and

princesses of her family, formerly entombed in the collegiate church of Dreux, torn from their sepulchre November 29, 1793; reunited by the filial piety of S. A. S. Mgr. le Duc d'Orléans July 28, 1821."

The chapel as it existed since 1838, erected from plans by the Architect Lefranc, presents as to its exterior an original appearance. Among the remains of the old feudal chateau, with which its modernity is in singular contrast, the chapel is a curious specimen of composite style, where are mingled in combination the otherwise harmonious Gothic, Byzantine and Lombard styles. The facade is pierced by a doorway flanked on either side by two elegant towers with columns and belfries. At the point of the arch stands out in high relief, just under the cross, the angel of the Resurrection; upon the plate, on either side, are two symbolized medallions. Still higher up, in the middle of the pediment, is a rose inclosing a clock. Then all around the building are other little steeples with balconies of delicately carved open work.

But the most characteristic part of the edifice is the central portion, or rotunda, with its carved dome. More than any other of the architectural motifs, this feature emphasizes the special purpose of the monument by giving it the ideal appearance of a vast mausoleum. The lightness of the details corrects the heaviness of the mass of the building, while the whiteness of the stone forming the play of light and contrasting with the verdure of the park goes far to heighten the general effect.

The interior of the chapel is composed of a nave, a transept and a niche behind the high altar. The choir is formed by the rotunda, which belongs to the original construction erected by the dowager Duchess of Orleans. On the sides of the older nave there are two altars consecrated to the patron saints of Queen Marie Amelie and Mme. Adelaide. The arch, ornamented with vases and pendants, is further embellished by a medallion of Saint Louis. Most of the stained glass of the windows was executed at Sévres from designs by Ingres. There are also two bas reliefs representing the "Adoration of the Magi" and the "Resurrection of Our Saviour."

The sepulchres are placed in the crypt, in which there are four vaults communicating with each other, and built in two stories. The first floor, constituting the "grand crypt," is circular in form and of the same dimensions as the rotunda, to which it corresponds. Daylight penetrates through windows, picturing events in the history of Saint Louis, designed by Rouget, Delacroix, Wattier, Horace Vernet, Bouthon and Flandrino. Here repose the dowager Duchess d'Orléans, and by the side of the Duc d'Orléans, who died in 1842, the princess, his

wife; the Princess Marie, Louis Philippe and his queen, Marie Amelie; Mme. Adelaide, sister of the king, and the Duchess d'Aumale, with her children; in short, all members of the royal family, save only the Duchess de Neinours and the Comte de Paris, who were buried at Weybridge, England. These tombs are ornamented with statues and bas-reliefs, several of which have a real artistic value.

One of the most remarkable of these is that of King Louis Philippe and his queen, the work of the

altar of the virgin." This wish was realized only in 1876.

A group of an entirely different character is that perpetuating the memory of the two children of the Comte de Paris, who died in infancy, the Princes Charles Philippe Marie and Jacques Antoine Marie. It consists of two infants under the tutelar cross and above a cloud which is bearing them away to the heavens. At the side the Duc de Penthievre, simply draped in his winding sheet, with a crown



1. TOMBS OF THE DOWAGER DUCHESS OF ORLEANS AND OF THE PRINCESS ADELAIDE.
2. TOMBS OF KING LOUIS PHILLIPPE AND QUEEN AMELIE.
3. TOMBS OF THE PRINCESS OF SALERNO, AND THE DUKE AND DUCHESS OF ORLEANS.
4. CHAPEL OF ST. LOUIS AT DREUX—TOMB OF DUCHESS D'AUMALE AND THE ONE RESERVED FOR THE DUKE D'AUMALE.

sculptor, Antonin Mercie. The king is represented as standing, bold in demeanor, in full dress and draped with the royal mantel. The two figures are very fine, and their expression, in so violent antithesis—the one indicative of the royal authority, and the other that of the severest family virtues—are entirely characteristic. Louis Philippe, in exile, wrote in his will: "I ask that wherever I may die, my body may be taken without display to Dreux, there to be placed in a tomb situated before the

1. TOMBS OF THE DOWAGER DUCHESS OF ORLEANS AND OF THE PRINCESS ADELAIDE.
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upon his head and a chaplet in his hands, reposes upon a marble tomb, under the protection of an angel with arms extended over him.

These monuments, classically artistic, with their rigid effigies, suggesting the idea of eternal repose are quite numerous, and several are reproduced in the engravings. That of the Duchess de Salerno resting in a sort of niche, partly inclosed by a decorative motive half Gothic, half Renaissance, is from the chisel of Chapu.—Views from *l'Illustration*.

A VIEW IN RIDGEWOOD PARK, BROOKLYN.

In our last issue two views of Prospect Park, Brooklyn, were given, which displayed more particularly the parts played in park adornment by architecture and statuary, features which serve to bridge the interval between the pure landscape effects of the park and its urban surroundings and approaches. Such features are being introduced as opportunity offers and funds are appropriated in the larger communities, and the work presents a rich field for architectural and sculptural effects in

culiar quiet which permeates the atmosphere of the copse, finds a response in human nature like to nothing else, and there is no part of park work likely to be more gratefully appreciated than the preservation of a certain proportion of the wooded landscape in every system of park development.

Ridgewood Park, in which the view herewith given is taken, is one of the easterly parks. It surrounds the distributing reservoir of the city, and contains twenty-six acres. While small, it is comparatively distinctive, and having remained until



A LEAFY WAY, RIDGEWOOD PARK, BROOKLYN.

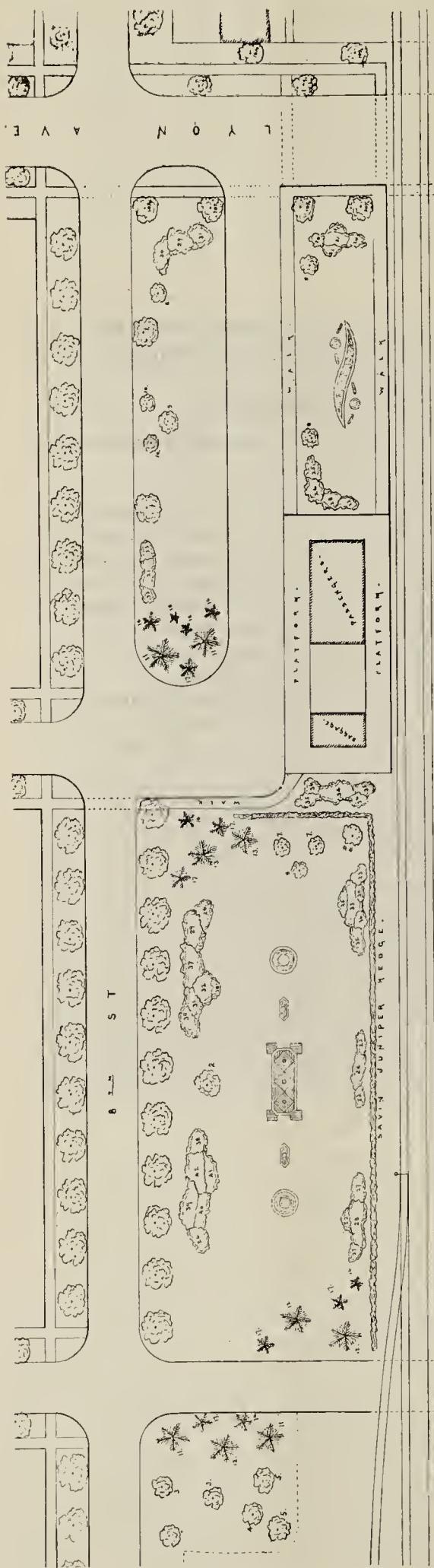
positions where the several arts may meet and join in an attractive harmony.

But there are other parks in Brooklyn, where as yet the hands of the gardener and forester have left few marks, and where nature still, to a large extent, holds full sway; that is to say, beyond the laying out of roads and development of paths and byways the woods appear as natural as one's conception may suggest. That this is a feature of park work worthy of careful consideration and culture, the natural instincts of man unquestionably assert. There is a fascination in a sojourn in the woods undeniably pronounced, from the influence of which few are free. The footfall in the leaves, the song of birds, the whisperings of the foliage and the pe-

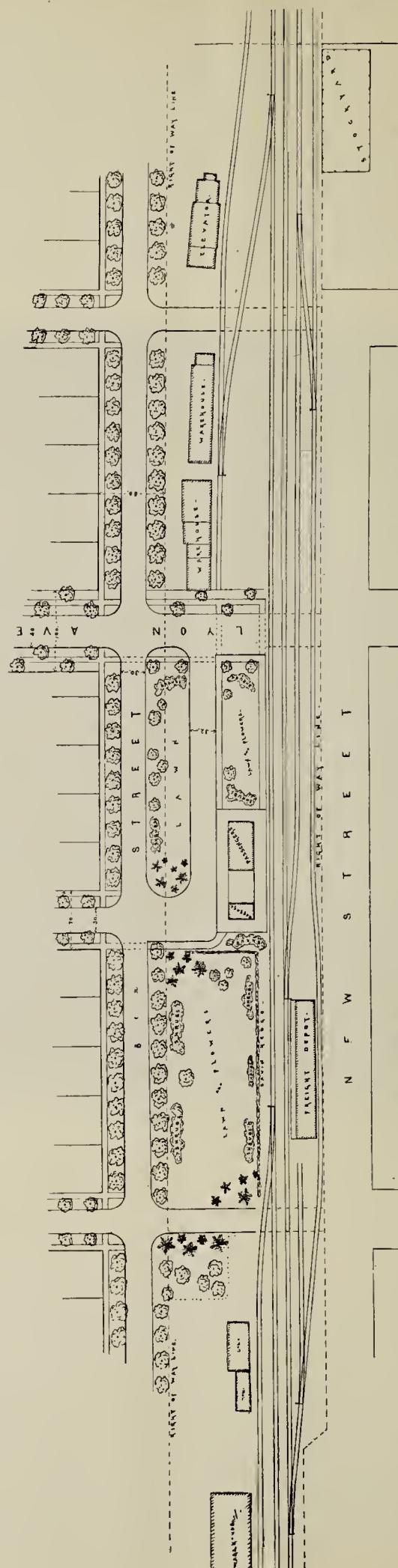
now more or less inaccessible to the masses, it retains certain features of novelty in its condition, which must make it attractive. It is so situated, as well, as to command views unsurpassed in extent and variety, including the beautiful landscape scenery of Long Island on the one hand, and on the other the varied and broken coast line made by bay and inlet with the broad expanse of the Atlantic Ocean beyond.

Besides the natural features of this park considerable planting out has been done, and on account of its splendid altitude and the possibility it offers for lighting effects in connection with the city reservoir, which it partially surrounds, a system of electric illumination is now being carried out.

PARK AND CEMETERY.



Enlarged Plan of Depot Grounds.



General Plan.

DESIGN FOR DEPOT GROUNDS, C., M. & ST. PAUL RY, LAKE CITY, MINN., JULY, 1896.

FRANK H. NUTTER,
LANDSCAPE ARCHITECT,
MINNEAPOLIS, MINN.

DEPOT GROUNDS AT LAKE CITY, MINN.

If there be truth in the old saying, "First impressions are lasting ones," there are but few places in the country which have not suffered from the fact that the railroad station and its surroundings are such as to give the newly arrived passenger, or one passing through on the train, most disagreeable impressions as to the attractiveness of the village. Lake City, Minn., is but one of the many municipalities whose citizens are beginning to realize the fact and seek for a remedy.

Located on a broad plain, sloping gently down to the shores of that expansion of the Mississippi river, known as Lake Pepin; protected on the west by rocky and wooded bluffs rising to the height of several hundred feet, while the view to the east across the beautiful lake is bounded by a similar range, springing almost abruptly from the water's edge, it is indeed a pleasant place, but to the traveller the entrance to these beauties is not one to arouse many bright anticipations.

All who have journeyed in the west can picture to themselves the net work of tracks, the elevators, ware houses, coal sheds, stock yards, etc., which go to make up the dreary outlook from the equally dreary passenger station. Occasionally there may be a patron to whom it gives a homelike feeling, while dozing in the waiting room or seated at the lunch counter to listen to the cattle at the shipping pen munching their corn, or to hear from the hog yard the shrill protest when some enterprising companion gets both feet in the trough, but to most travellers distance will surely lend enchantment.

In anticipation of increased accommodations which must soon be provided at this point, a committee of citizens have had a plan prepared by Mr. Frank H. Nutter, Landscape Architect, of Minneapolis, Minn., the acceptance of which in its general features if not in detail, they are urging upon the railroad officials, promising on the part of the city to do the necessary grading of the drives and lawns, including the street to the center of the city, while the Jewell Nursery Co., who are located here agrees to furnish and care for the necessary trees, shrubs and plants.

The general plan for improvements may be briefly specified as follows:

A new street to be opened by the city along the west side of the railroad to accommodate a new and enlarged freight depot and trackage, stock yards and coal sheds to be removed to other and less objectionable spots and the grounds thus vacated to be used as ornamental grounds around a new and modern passenger station.

As all the surrounding property is platted in the conventional "checker board" style, all that is done

here must conform to it. The principal change in the streets is to narrow up the roadway to thirty or forty feet as the case may be, leaving on either side broad spaces for lawn, tree-planting and sidewalks.

Ample access is afforded for carriages to the rear of the depot, the drive passing through the tree planted lawns which will surround it on three sides, and in the season will be decorated with floral displays of various designs.

If the present intentions are carried out, the great change effected cannot fail to arouse interest in other localities in the vicinity which may be suffering from like untoward introductions to the travelling public.

Planting List.

The following is the planting list, with numbers corresponding to those on plans:

DECIDUOUS TREES.

- | | |
|------------------------------|--|
| 1. Kentucky Coffee Tree. | 6. Weeping Mountain Ash. |
| 2. Populus Bolleana. | 7. Wier's Cut-leaved Maple. |
| 3. Populus Cerinensis. | 8. Weeping Cut-leaved Birch. |
| 4. Laurel-leaved Willow. | 9. Fringe Tree (<i>Chionanthus</i>). |
| 5. Wisconsin Weeping Willow. | 10. Rosemary Willow. |
| | 10½. Linden. |

Unmarked Street Trees—Ash or Elm.

EVERGREEN TREES.

- | | |
|---------------------------|--------------------------|
| 11. White Spruce. | 16. Pyramidal Arborvitæ. |
| 12. Douglas Spruce. | 17. Mugho Pine. |
| 13. Colorado Blue Spruce. | 18. Savin Juniper. |
| 14. Abies Concolor. | |

SHRUBS.

- | | |
|--|--|
| 21. Hydrangea. | 32. Josikæa Lilac. |
| 22. Spiræ van Houttei. | 33. Flowering Currants. |
| 23. Spiræ Sorbifolia. | 34. Clethra Alnifolia. |
| 24. Spiræ Billardi. | 35. Cut-leaved Elder. |
| 25. Spiræ Reevesii. | 36. Golden Elder. |
| 26. Bush Cranberry | 37. Mock Orange (<i>Philadelphus</i>). |
| 27. Snowball. | 38. Native Dogwoods (Killikinnick). |
| 28. Lonicera Fragrantissima. | 39. Juneberry. |
| 29. Lonicera Tartarica (pink and white). | 40. Carragana. |
| 30. Common Lilac (purple and white). | 41. Buffalo Berry. |
| 31. Persian Lilac (purple and white). | 42. Strawberry Tree. |

The antiquity of legal methods is curiously illustrated by the recent discovery of the oldest will extant. This unique document was unearthed by Prof. Petrie at Kahum, Egypt, and is at least 4,000 years old. In its phraseology the will is singularly modern in form, so much so that it might be admitted to probate to-day.

The delightful labor of flower farming is steadily on the increase among the people of the Scilly Isles, the astonishing quantity of forty-one tons of cut blossoms, chiefly narcissus, being sent over to England weekly during the winter season. The farms, which employ many hands and much capital, are excessively interesting, and the sight of them in February or March is worth even the risk of a rough voyage. Literally millions of white and yellow blossoms, richly fragrant, nestle between tall hedges of euonymus and veronica, and form a fragrant picture—exquisite as it is unique.

CEMETERIES IN THE OZARK MOUNTAINS.

A recent trip through the Ozark fruit belt took me over the Missouri section of the Frisco railway and also a part of the Kansas City, Ft. Scott and Memphis road nearly to the Arkansas line.

While looking into the fruit interests of this region I incidentally paid more or less attention to its cemeteries, and found it a promising field for the dissemination of specific information regarding the modern movement in cemetery matters.

There seems to have been no champion of the good cause to go down to the help of a people already in the front rank of most progressive movements.

It is a beautiful country with no end of landscape ready in a large way, and only waiting for recognition of its splendid possibilities in the development of cemeteries that might be landscape models as well as perfectly adapted to practical use. Every thing in this line seems yet to be done. But, on the other hand, there is far less to be *undone* than in the majority of old grounds that have been wrongly started.

* * *

To speak specifically: the cemeteries of Pierce City, Lawrence Co., and of West Plains, Howell County, are practically alike in condition and location —both lacking in design and both on hill tops. Both are well situated for securing excellent landscape effects and the surrounding country abounds in native material for the ornamental planting of the grounds.

In neither has any advantage been taken of either situation or material.

Good results could soon be obtained by a realization on the part of the cemetery authorities not only of the necessity for a change, but also of a correct conception of what constitutes a desirable cemetery. And that's the rub!

But among the public spirited citizens of the two pretty little cities there are doubtless some willing to patiently study the features of the lawn plan and, having decided on a fitting scheme for their cemetery site, will bring their influence to bear in a determined effort to start anew and in the right direction.

To attain success this must be done even though the resulting plan runs counter, in some of its details, to the preconceived notions of lot owners

These prejudices will be found to rest on nothing more substantial than inherited respect for time honored customs that any intelligent man or woman can readily be made to understand are based on wholly wrong premises, or at least upon those that are altered or removed by changed conditions. For instance, when the pioneers buried their dead in a wild and sparsely inhabited country, grave mounds and enclosed plots were essential to mark and protect the spot, but it does not follow that in civilized communities the beauty of cemetery lawns need be spoiled by mounds that give much the appearance of a village of Prairie dogs or by marking them into checker boards with fences, hedges and copings. Both customs are relics of by-gone days and conditions and have long outlived their reason for existence.

If the officials take action soon the changes in these two cemeteries need not be very great. The



SOME OF THE TREES, MAPLE PARK CEMETERY, SPRINGFIELD, MO.

worst features of the grounds as they now stand are the use of copings, the elevation of lots above the grade of the avenues and alleys and the mounding of graves.

It goes without saying that all this should be done away with and the further revision of the grounds undertaken only after careful study of the underlying principles of the so-called lawn plan. A friend at Pierce City suggested filling in the avenues to bring them to the level of the raised lots. This seems a simple way to overcome a defect that is bad enough in any cemetery, but the results of this dry season should be convincing proof of its peculiar unfitness on light soils and dry exposed sites.

At Springfield I found the first cemetery I have yet come across that boldly announces itself by name as a park. When I heard that the leading cemetery was called Maple Park I felt that I was to see a pronounced if not ultra example of the lawn plan.

It is about the least park-like of any I have yet seen.

But there are evidences of excellent intentions, and while there is room for serious criticism of the grounds and methods, there is much to heartily commend. There can be no doubt about the nice feeling that prompts the officials to apply the improvement fund at command to building a spacious, convenient and attractive dwelling for their superintendent, and the appropriateness of this step becomes pronounced when it is learned that this officer is a woman, Mrs. E. H. Lair, one of the two who, so far as I know, occupy such a position. In addition to this substantial improvement much well made new roadway, to correspond with the older roads, was in course of construction when I was there. Evidently what is done at Maple Park is well done, which makes it certain that when the management realizes the defects in their plan the rectification will be thorough and complete.

I trust that it will be decided to introduce the lawn plan without delay, for otherwise the fine hard Maples that are now a source of pride will be ruined.

The grounds derive their name from these trees which are at present really fine, but they will soon be permanently spoiled unless they are thinned. There are far too many of them for the size of the enclosure and they are set in stiff rows that are the reverse of park-like. Indeed the effect is the same as the closely set wind breaks that shelter hundreds of farm houses on the broad wind-swept prairies of Illinois. Just rectangular blocks of timber.

These formal rows of maple make the grounds monotonous when seen from either without or within, and in addition the almost unvarying use of Irish Junipers on lots already occupied, produce a deadly monotony that is unrelieved by the shrubs and vines that ought to be used there with excellent results.

The formal stiffness of the entire ground is suggested by the design of the entrance, which is good as far as it goes, but plainly shows the lack of vines and shrubs to soften the hard lines and blend trees and sward into a harmonious picture.

The planting of this cemetery as it stands is bad, but fortunately it is in excellent shape for remodeling on wholly different lines. And, better still, the monotony begins to pall, the Junipers to die, and the pleasant superintendent to realize the mistakes of the past. The trees are so numerous and so uniformly

good that an artist could design alterations that, if carried out next spring, would speedily make Maple Park justify its attractive name.

* * *

No one feature of cemeteries needs more attention than boundaries.

In a region abounding in stone no boundary is more appropriate than stone walls. Southern and southwest Missouri is rich in such material. In some locations boulder walls would be possible, and by the addition of picturesque planting would be artistic and fitting.

In others, walls built of flat stones, either with or without masonry, and partly covered by native vines would be both beautiful and suitable.

The accompanying engraving of a stone wall forming part of the boundary of Graceland Ceme-



WALL AT GRACELAND CEMETERY, CHICAGO.

tery, Chicago, (designed by Mr. O. C. Simonds, to whom we are indebted for the photograph used,) aptly illustrates these suggestions. It is made of flat stones without masonry and serves as a retaining wall for the very sandy soil of the interior which at that point is higher than the street grade. The interstices of the wall are filled with good soil in which slips of Virginia Creeper are rooted and at this time largely clothe the exterior of the wall.

In soil that retains water such a retaining wall would require masonry and the vines could then be planted against the base.

This illustration also shows the advantage of border plantations inside cemetery boundaries. They serve the double purpose of screening the grounds from surrounding streets and dwellings, and giving appropriate seclusion to the interior.

Such treatment is desirable for all cemeteries but perhaps especially so for those located near the dwellings of the living, and such treatment is sanctioned by the best landscape gardeners.

Fanny Copley Seavey.



RIVERSIDE CEMETERY OFFICE, CLEVELAND, O.

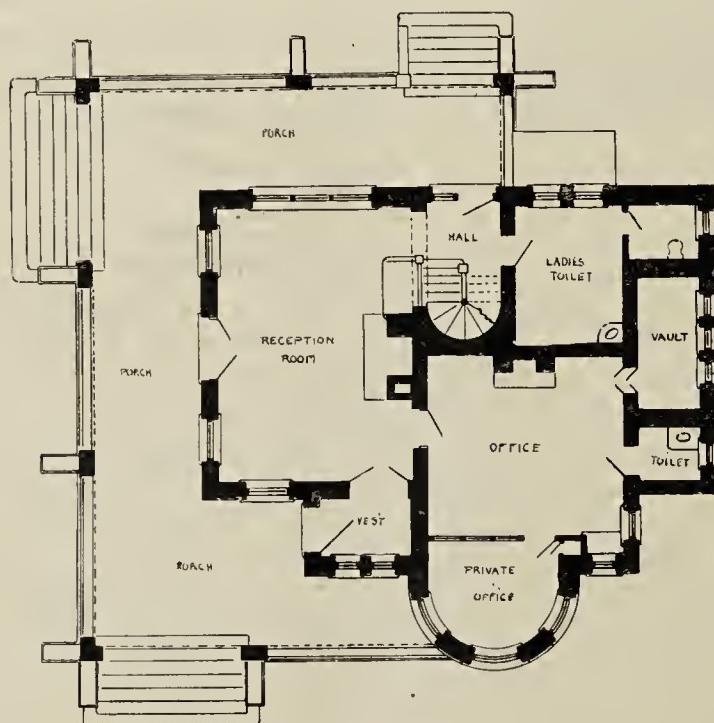
OFFICE OF THE RIVERSIDE CEMETERY, CLEVELAND, O.

The accompanying illustrations show perspective elevation and plan of the new office building recently completed for the Riverside Cemetery Association, Cleveland O.

The building which is situated on a pleasant site near the broad main entrance in the cemetery is of the beautiful French chateau style of archi-

tecture and is unique as a cemetery building, uniting with its exterior beauty a modern completeness of arrangement within. It is built of brown stone from the Long Meadow quarries at Massachusetts, from designs of Mr. C. W. Hopkinson, architect, of Cleveland, at a cost of some \$20,000. At the front and extending 25 feet above the main building is a tower from which beautiful views of the cemetery may be had. The wide stone arched verandas with an ample supply of settees is an inviting and useful feature of the building.

The first floor contains a large well lighted waiting room, which, like the vestibule and ladies' toilet room adjoining, has mosaic floors and high arched and paneled ceilings of selected oak. The art window in the waiting room contains 2,955 pieces of plain and stained glass. The broad massive mantel and fire-place with gas logs, lend a comfortable appearance to the room. The superintendent and secretary's office with its decorated walls and semi-circular windows is finished in quarter sawed oak and polished oak floor. A well constructed fire-proof vault for books, maps and records, adjoins the office room. From the hall a handsome winding staircase leads to the two large rooms on the second floor, intended for the use of the cemetery trustees. The wood finish of the entire building is of highly polished quarter sawed oak. All the rooms are fitted with gas chandeliers of neat design in Flemish finish. In the basement are the closets and storage rooms and furnace for heating the building.



GROUND PLAN OF RIVERSIDE CEMETERY OFFICE, CLEVELAND, O., CHAS. W. HOPKINSON, ARCHITECT.

A CHURCH IN RURAL ENGLAND,—ST. JAMES,
EAST COWES, ISLE OF WIGHT.

The one who travels through England is almost sure to return home with praises for the beautiful appearance of the churches he meets with on his journey. It is not always that the edifice itself has architectural merit, it is oftener the trees and vines which surround it that make the attraction. Your readers will remember the picture of the old church at Bonchurch which was presented in a former issue of PARK AND CEMETERY. It represented a church so closed in by trees as to be almost hidden from view. The present illustration displays a church not as old as the one spoken of, but assuredly beautifully set off by the trees and vines which surround it. It is St. James Church, East Cowes, Isle of Wight.

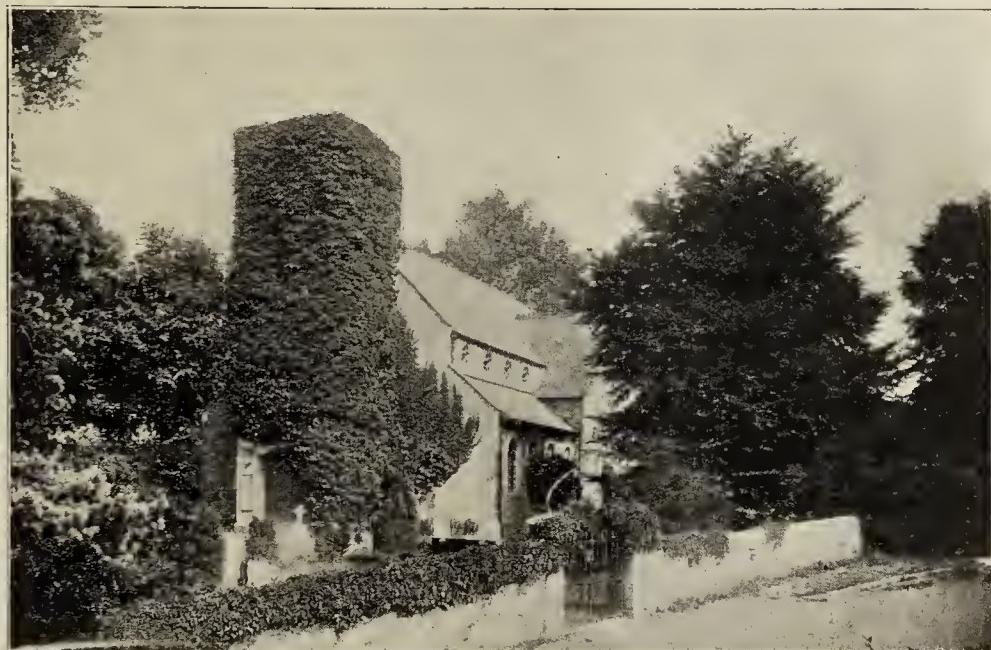
This church is not far from the royal residence, Osborne, and its corner stone was laid by Queen Victoria while she was yet Princess Victoria, in 1831. There is also a cemetery of four acres, the ground for which was given by the Queen. East Cowes is situated across the Solent, almost opposite the port of Southampton; and it would well repay any traveler by the American line steamers when he lands at Southampton, to take a packet boat and visit it and other places of interest near by.

Returning to the illustration of the church, it will be seen how prettily the ivy has enveloped the tower. It used to be said that ivy tended to make walls damp, but most every one knows better now. The leaves throw the water off that falls on them, keeping walls drier than they would be otherwise. The large, dark looking deciduous tree, is the blood-leaved beech, a beautiful tree anywhere. It seems well in place in its present position; at the back of the church and at its side are some fine English elms. This tree has to be set at some distance from a building as it grows to an immense size in time, rivalling the oak in height, if not in spread of branches.

Both yews and cedars are favorite trees in all English plantings. There is one cedar to be seen in front of the beech, which has the appearance of the Lebanon. As I have said in former letters, there are many nice trees we could grow here which are seldom seen. It is not at all uncommon to hear it said, "the cedar of Lebanon is not hardy," yet there

are trees of it 70 feet high in this city. There are three true cedars hardy here, the Lebanon, Deodar and Mt. Atlas. The latter has lovely blue foliage, not unlike the bluest of the *Abies pungens*, the Colorado blue spruce. I think park superintendents would never regret planting these lovely cedars. Possibly the Deodar is less hardy than the others, and might not succeed much further north of this city.

The Lebanon is hardy from its seedling state with us, never losing a leaf in the coldest winters. Mentioned so often in the Scriptures, and enquired for by so many, not to mention its lovely growth, it should be planted in all public places where it will live. Many, too, have seen them on Mt. Lebanon, flourishing still, almost the only thing



ST. JAMES CHURCH, EAST COWES, ISLE OF WIGHT.

standing to remind them of days in which occurred events that shaped the destiny of the world.

"A step as fleet, an eye more bright,
Hath Judah witness'd there;
And o'er her scenes of lost delight
Inhabitants more fair.
The cedars wave on Lebanon,
But Judah's statelier maids are gone!"

Yews, too, are deemed rather tender, but it is more a fable than a fact. Some of the nicest plants one could wish to see are grown by the Rochester, New York, folks, cold as the winters are there. In very severe winters I have known the Irish variety to be somewhat scorched on the sunny side by the winter's sun. The Irish is the one shown near the tower in the illustration. Its upright, pyramidal character well fits it for such a position. And in partial shade such as the church affords, the foliage is of a darker green than otherwise, an additional reason for planting it in partial shade.

Joseph Meehan.

GARDEN PLANTS—THEIR GEOGRAPHY, XXIII.

PASSIFLORALES.

THE MENTZELIA, PASSIFLORA AND BEGONIA ALLIANCE.

This again is a considerable alliance of twenty-seven tribes, 301 genera and 5,625 species. They are largely tropical, but well represented northwards. We in this country are well acquainted with the pumpkin and pickle tribes, which differ but little structurally from passion flowers. In the tropics some tribes contain trees or shrubs, and the climbers are often woody. At the north the species are annual or rarely perennial herbs, often climbing by tendrils. The beautiful passion flowers are largely



PASSIFLORA INCARNATA,
WITH LEAVES MUCH REDUCED.

glory in the corona of the flower. The old Spaniards had lively imaginations! Two herbaceous passion flowers extend well north in the middle United States.

Mentzelia (including *bartonia*) is a genus of forty species, all natives of tropical and temperate America. *M. Lindleyi* and a few others of the yellow and orange flowered annuals are admitted to gardens.

Loasa has fifty species, natives of the central and western parts of the American tropics. Such as are seen in gardens are climbing annual and biennial herbs, with curious yellow, orange, red, white or variously shaded flowers. Their culture is quite limited, however, because the plants are veritable "stinging nettles," and irritants.

Turnera is a genus of over fifty species of small shrubs and herbs, natives for the most part of tropical America. The botanies credit the southern United States with two species—*T. Caroliniana* and *T. diffusa*—recently found in Texas. It is the "Yerba de Vermule" of the Mexicans. Several species have small axillary yellow flowers and narrow leaves.

Passiflora has 175 species in the tropical and temperate parts of America, northwards to the

middle United States and southwards to Chili; in sub-tropical Asia, northwards to China and the mountains of India; and in Australia. Their handsome flowers range in color from scarlet, through crimson to purple, often beautifully blended and shaded by lighter colors, while the less showy species have yellowish, greenish or white flowers. But few gardens, even in the tropics, have a fair collection of them, for they require much space for development. I have never seen or heard of any adequate arrangement for their culture; they require a group of some allied tree to scramble over, such as the "Bendy" tree of Malabar and Ceylon; at the extreme south the *Carica* could be used, or northwards where the Gourds grow well some appetalous tree or shrub, such as Mulberry or Osage Orange. They are beautiful objects when festooning trees, but often objectionable under glass. In mild climates a few are hardy enough to be grown and trained on walls. In such positions *P. cœrulea* endures the climate of England from London southwards. There is a white flowered variety of this species. *P. incarnata* is herbaceous in growth, and although rarely found wild north of Virginia, it endures the winters under south walls and on dry soils two or three hundred miles further north. The foliage is fine—much like that of *P. edulis*—but the flowers, though pretty, are small. The fruit is eatable. It was the first hardy species introduced to Britain. *P. lutea* is found in damp thickets from Virginia southwards. There are ten or twelve species and varieties, natives of the United States, principally along the borders of Mexico, and in Florida.

Tacsonia has twenty-five species from tropical and sub-tropical parts of America; none are Brazilian, however, but several of the finest are found at considerable elevations on the Andes. *T. mollissima*, in fact, is found in the province of Quito in Ecuador. I have grown this species where the annual temperature ranged from 30 to 64 degrees Fahrenheit in the shade, and there it would festoon large trees in three or four years, bearing hundreds of beautiful pink flowers, succeeded by eatable yellow fruit. *T. Van Volxemi* and a few others may be had in cultivation, but many are unknown to northern gardens. In Southern California they are better known. Where the accommodation of a greenhouse exists the effort should be made to flower these fine plants outdoors during summer. They should be kept in good-sized pots or boxes, with large holes in them, and plunged over the rim near some support to which the plant could be fastened. On the approach of frost they should be cut back, coiled up, stowed away under the bench sides of a cool house, and kept quite on the side of dry-

ness until spring. Some of the species prefer to flower in winter or early spring; others flower in autumn, but probably several could be humored to our seasons.

Carica Papaya is the "Papaw" of the tropics, but extends to Southern United States territory. It has no connection or affinity with the northern

shrub bearing its common name.

Lageuaria, the bottle gourd, is monotypic and adventive south.

Momordica has 25 species, natives of tropical Asia, Africa and Australia; *M. Charantia* and *M. balsamea*, with showy fruit, are grown in gardens to some extent, and have naturalized in parts of the United States having protracted measures of tropical heat.

Luffa has seven species, all tropical, but *L. acutangula* has escaped from cultivation at southern points. The young fruit of this species is used in India, but some of the others are violent cathartics.

Bryonia has eight species in Europe and the Canaries. *B. dioica* is the only British plant belonging to this tribe. It is a little remarkable that none of these plants have become adventive in the States. They have perennial roots, with rather pretty foliage, on vines full of bright red berries in autumn, when they enliven the hedgerows over which they climb.

Cucumis, the cucumbers and melons, have twenty-six species, natives of Asia and Africa. The garden varieties are without number.

Citrullus is the watermelon genus, also from tropical Asia and Africa, but said to be adventive on the Mexican border. There are three species, and innumerable varieties.

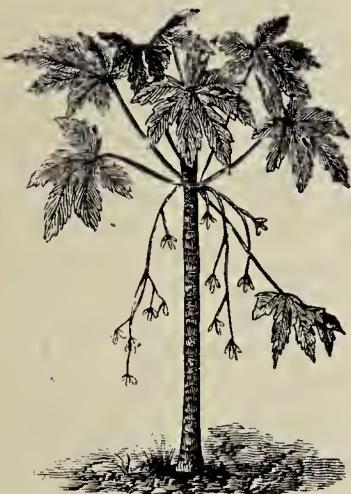
Sicana, in two species, recently introduced from the West Indies and South America, has useful cucumber-like and round fruit.

Cucurbita is the pumpkin, squash and gourd genus, and are accorded ten species. The varieties are endless, and often very ornamental. They are all regarded as tropical, but they are very much at home in the United States; in fact, two or three are deemed natives; *C. foetidissima* extending well north in Nebraska, with large roots, leaves and flowers, and fruit is regarded as perennial. *Thladiantha dubia*, with bright red fruit, is perennial in Southern England. The fruits of some enter largely

into the domestic economy of the people in all warm countries, or in countries having warm summers.

There are over eighty genera in the various curbitaceous tribes, and several such as *Echinocystis*, *Sicydium*, *Sicyos*, *Sicyosperma*, etc., are natives, the first named often grown in gardens northwards for covering porches and arbors.

Begonia is an immense genus of between 400 and 500 species, natives of the tropics and sub-



CARICA PAPAYA.



BEGONIA MANICATA AUREA.

tropics of Asia, America, Africa and some of its islands, and the islands of the Pacific.

There are but two other genera in the tribe, and one is regarded as anomalous. The whole of them seem rather anomalous among passion flowers and cucumbers, but botanists have excellent reasons for placing them in alliance, they say. Whether they have or not is not a question here, but only whether a good garden group can be formed within the limits assigned. In the tropics or sub-tropics there is no question, and none where tropical summer plants are used, but there is only one hardy begonia for the Middle States. *B. Evansiana* is perfectly hardy at Princeton, N. J., and possibly further north under south walls and similar favoring conditions. It is an Eastern Asiatic species, and some effort should be made to secure hybrid varieties of so handsome a plant, which hitherto does not appear to have yielded any. *B. Veitchi* was reckoned hardy in England at one time, although it does not now appear among the herbaceous plants at Kew. Possibly these two species, or *B. Evansiana* fertilized with some African

or Himalayan kind, such as *Richardsiana*, *Beddo-meii* or *Wallichiana*, would break into varieties, and unless it be different to most Begonias there is little doubt but they would prove useful, and perhaps fairly hardy garden forms.

The last tribe of this very interesting and beautiful group is *Datisceæ*, in three genera and four species, including *Datisca glomerata* from California and a Himalayan species, and singularly also



GOULD-LINED GRASS WALKS IN THE HERBACEOUS GARDENS AT KEW.—
Gardener's Chronicle.

the "Bendy tree" (*Tetramelis*) of South India and Ceylon.

This reminds me how few trees or shrubs of the group are at all known in cultivation, and as they are better and more natural supports for the climbers than bare posts or wire netting, I may perhaps conclude with a mention of a few of the genera in which they are found for the benefit of those in charge of grounds at the extreme south, who may have friends in the tropics who can send them seeds to try. *Casearia* is a large genus of trees and shrubs, mainly from the West Indies, and South America. *Samyda* is also West Indian. *Gerardina* is from Natal, Southeast Africa. *Homalium* is also a considerable and widely diffused genus, and *H. Cochin-Chinensis*, a shrubby kind, extends, I think, up to the sub-tropics.

Trenton, N. J. *James MacPherson.*

Perhaps the most splendidly decorated church in England is that of Whitley Court, Worcestershire. It is entirely constructed of white marble, the pews are chastely carved, and the pulpit is of genuine Carrara marble, richly paneled with precious stones.

A HALF HOUR WITH INSECTS, INJURIOUS AND BENEFICIAL.*

Insects play a very important part in the affairs of men. Few persons realize the vast consequence of the doings of these small creatures. The study of the life history of insects is fascinating and wonderful. The value of such observation is very great from either an economic or scientific point of view. The more complete this knowledge, the more successful will be the efforts to destroy the injurious species and encourage the beneficial ones. Any one can make observations of importance if they will devote themselves to it. Think of Francois Huber, who became blind in early life, yet most of his observations (which have never been surpassed) were made after he lost his sight. He was born in Geneva, Switzerland, and died at the age of 84. When an attempt is made to study up the life history of an insect it will be soon apparent that much remains to be done with many of even the most common species. It is well known to naturalists that cemeteries are excellent preserving places for insect and other animal life, as they are also the resting places for the dead. In our beautiful Spring Grove I have observed an abundance that I have never been able to find elsewhere. Every one who cultivates should know insects and be able to distinguish friend from foe, because they have much to do with failure or success, some as destructive pests, others in the important part they play as parasites in ridding us of pests, and yet others in the cross fertilization of plants. The destruction of trees and foliage plants by insects is

a very perplexing problem, and a knowledge of the best methods of combating their work in this direction is of great importance.

Much has been done by the very able corps of entomologists employed by the Agricultural Department at Washington, D. C., and by the various States at their experiment stations. The results of this work have been published in a series of papers called "Insect Life," and in the reports and bulletins issued by these various departments. It may be of interest to know that the oaks have 214 different species of insects that prey on either roots, trunks or leaves; the hickory, 87; the black walnut, 11; the elm, 43; the maples, 37; the pine, 102; the juniper, 9; the spruce, 24, etc. With the multitude of devastating pests one would suppose that the beautiful shade trees would have a precarious existence, but friendly parasites and climatic influences generally occur and keep the destroyers in check. Though when conditions are favorable a very destructive species will increase in numbers and valuable trees be destroyed. Every large cemetery should be provided with a good working library, so species can be studied and the remedy, if there be one, known and applied. Do not think that such a library would be very costly, for such is not

*Paper read at the Eleventh Annual Meeting of the Association of American Cemetery Superintendents, Cincinnati, O., September, 1897. By Mr. Charles Dury.

the case. The bulletins of the Agricultural Department published by the United States government at Washington and the reports of the entomologists of the different States are the most important literature on the subject, and these can be obtained free by applying for them. These, with Packard's Guide to the Study of Insects, Comstock's Manual, Harris' Insects Injurious to Vegetation and Packard's Insects Injurious to Forest and Shade Trees would form the nucleus of a good working library. While you cannot *always* succeed, yet you can do much to lessen damage, if not entirely prevent it. Many of our worst pests have been the introduced ones, and this may be partly explained by the fact that in most cases the native parasite has not been introduced with the pest; in such cases it is sometimes desirable to search out the parasite and introduce it, but this must always be done under the most intelligent supervision, lest other injurious pests be also introduced. One of the most striking examples of the introduction of a destructive insect is the case of the "Fluted Scale" (*Icerya purchasi*) into California on imported cuttings from Australia. This scale spread until the entire orange culture seemed doomed. Prof. Riley and his assistants investigated and found that while the scale had been brought here, its parasites had not been introduced with it.

Sending an agent to Australia, a number of the parasites of the "Fluted Scale" were brought over. One of them, a small "Lady Bird," called *Vedalia Cardinalis*, a very rapid breeder, attacked the scales with such vigor that it practically wiped them out in a few weeks!

Bearing in mind the fact that every conceivable remedy had been tried on these "Scales" without success, and that many thousands of dollars had been spent, this result is one of the marvels of practical entomology. Mr. Wm. F. Channing of Pasadena, Cal., son of the eminent Unitarian divine, wrote: We owe to the Agricultural Department the rescue of our orange culture by the importation of the Australian "Lady Bird" (*Vedalia Cardinalis*). The white scales were encrusting our orange trees with a hideous leprosy. They spread with wonderful rapidity, and would have made citrus growth on the whole North American continent impossible within a few years. It took *Vedalia* when introduced only a few weeks absolutely to clean out the "White Scale." The deliverance was more like a miracle than anything I have ever seen. In the spring of 1889 I had abandoned my young Washington Naval orange trees as irrecoverable, yet these same trees bore from two to three boxes of oranges apiece at the end of the season (or winter and spring of 1890). The consequence of this deliverance is that many hundreds of thousands of orange trees have been set out in Southern California. In other words, the victory over the scale was complete, and will remain so. It must not be thought that all cases of the action of parasites will be as successful in exterminating noxious pests, for such is not the case, while parasites undoubtedly control the excessive increase of a species and hold the balance even, yet in many cases their action is of no practical value. Among the beneficial insects the family of Coccinellidae or "Lady Birds," as they are commonly called (to this family *Vedalia Cardinalis* belongs) are of first importance. Their destruction of "plant lice" is wonderful. Were it not for these beetles the *Aphides* or "plant lice" would destroy all vegetation. I once had a cherry tree that was completely covered with "plant lice," and the

leaves curled and turned yellow. I thought the tree would surely be killed, but in a few days the "Lady Bird" larvæ cleaned out the plant lice so completely I was unable to find a living one. Dr. Asa Fitch mentions a man who complained that his rose bushes were more seriously affected with "plant lice" than his neighbors, notwithstanding he conscientiously cleaned off the old parent "bugs," having mistaken the beneficial "Lady Birds" for the parents of the "plant lice." I saw a farmer near St. Bernard killing potato beetles by knocking them into a basin of coal oil. He had also killed many of the 9-Spotted Lady Bird (*Coccinella 9-Notata*). I told him he was killing a friend when he included this "lady bird" in with the potato beetles, but he replied that the "lady bird" was in bad company, and proceeded with the killing. The introduction of a pest is very easy and frequently brought about in a curious manner. Some one (I never learned who it was) sent me several of the large European "Slugs" (*Limax Maximus*) as a present. I was away from home at the time, and my housekeeper placed the tin box they were in out on a shed. A storm came up that night and the box was blown off and the "slugs" escaped, and Avondale is now populated with this nasty, destructive "slug." Trouvelot, a silk culturist, imported into Massachusetts eggs of the Gipsy moth (*Ocneria Dispar*). Perhaps, and it is to be hoped unintentionally, a box containing some of these eggs was left standing on a window sill; it was blown out and Trouvelot was unable to find the eggs, and the result is that an area of over 200 square miles has been devastated by this terrible pest, and over seven hundred thousands of dollars have been spent in the endeavor to exterminate it and limit its spread. It is thus easy to see how an insect that may be comparatively harmless in its own country because of the natural parasites that hold it in check, when removed to another locality where these parasites are absent soon increases so as to become a formidable scourge.

There is much about natural history in the popular mind and printed in the newspapers that is mythical. The old legend of the hair from the tail of a horse turning into a snake or worm yet finds some believers. The true history of the "hair snake" or "worm," or as naturalists call it, *Goedius Aquaticus*, is very remarkable, even stranger perhaps than fiction. The hair worm deposits its eggs in the water; these eggs hatch into minute swimming creatures provided with little hooked arms. When a grasshopper or cricket accidentally falls or jumps into the water one of these little baby hair worms fastens to it before it gets out and eats its way between the segments, feeds on the fatty parts just beneath the skin without killing its host. When the hair worm is full fed the grasshopper must again get into the water or a damp place, when the hair worm again wriggles out to deposit its eggs and again go through the wonderful cycle of its transformations. Its reproduction depends first on the grasshopper getting into the water, becoming parasited and getting safely out again, remaining out long enough for the hair worm to become full fed and then getting back to the water to enable the hair worm to accomplish the purpose of its existence. While the hair worm perhaps does not very much reduce the number of destructive grasshoppers, yet it furnishes us with a marvelous instance of how nature works. The "grasshoppers" do not become such a very serious pest in this locality as they do in some parts of the west. Some years ago, while in Kansas, I was awed at the de-

struction caused by the "Rocky Mountain Locust," a small species like our little red-legged one, only having longer wings and an appetite that was insatiable. It was during one of the great invasions. The sun's face was darkened with the swarms, the green fields were converted into a desolate waste of bare stalks and hard woody fiber that was proof against their jaws. On up grades the train ran with great difficulty, owing to the piled up myriads on the track. Millions were crushed beneath the wheels. They came into the cars and ate holes in our clothing and gnawed at straw hats. The rivers and creeks were a floating mass of their dead bodies, and every bit of water was tainted with them. When they alight they circle in swarms about you, dashing into open doors and windows. Fortunately these visitations are now rare, owing to the improved methods employed for their destruction and a better understanding of their habits. In Spring Grove early in August, while listening to the song of a Cicada, commonly but erroneously called "Locust," I suddenly heard the contented song changed to a scream of agony! Looking for the cause of this, I saw the Cicada come tumbling to the ground with a huge wasp clasping its body. Having often seen this tragedy enacted before, I watched its termination. The Cicada was paralyzed and unable to move, the wasp quickly dragged its victim to a circular hole in the ground and plunged down out of sight. Since then I have excavated several burrows and found the larva and cocoons of the wasp.

The wasp digs its burrow and makes cells of suitable size at the end of each gallery. When all is ready the wasp sallies forth in search of a victim, which it quickly attacks. One thrust of its fearful sting and the victim is helpless. It is then dragged or carried into the burrow. An egg is placed on the breast of the Cicada. This egg hatches into a white larva, which perforates a hole in the body of its victim and feeds on the juices and soft parts. Growing rapidly, by the time the Cicada has been consumed the larva spins its cocoons, in which it remains through the winter to emerge next season a perfect wasp.

The marvelous part of this tragic history is the curious property of the sting of these wasps. It does not kill its victim, but only paralyzes and renders it comatose, preserving it indefinitely so the larva will have fresh food as long as it requires it. It has been proven that a Cicada stung by one of these wasps will keep perfectly for over a year if the burrow be not too damp. Another curious fact is that the wasp will provide two or more Cicadas for a female egg, that sex being much the largest, and only one for the male, which is the smallest, and consequently requires the least food. The most pleasing and beautiful insects are the Butterflies, or as entomologists call them, *Lepidoptera*, and excepting perhaps the cabbage butterfly, our butterflies are not very injurious. This cabbage butterfly was introduced from Europe, and first made its appearance in this vicinity along Mill Creek Valley many years ago, near Spring Grove Cemetery. I captured some one day while out collecting, when they first appeared, thinking I had a prize. I hurried home with them, but to my dismay discovered on comparing that I had *Pieris rapæ*, the European cabbage butterfly. It has devastated the State. How it came here no one seems to know exactly, although Mr. Scudder has published such facts as he was able to obtain in regard to it.

Some of the butterflies are such beautiful and grace-

ful creatures that they add much to one's pleasure during a stroll in field or woods, and nature's open page would be robbed of its chief ornament without them. Some of the tropical butterflies are clothed in tints unsurpassed by any of nature's lovely gems. Certain species mimic dry leaves for protection, and they present such a variety of pattern, marking and lovely bits of color that they may well excite our wonder and admiration, and their very interesting transformations are to many emblematical of beautiful and poetic thoughts.

"Child of the Sun, pursue thy rapturous flight,
Mingling with her thou lov'st in field of light,
And where the flowers of paradise unfold
Quaff fragrant nectar from their cups of gold;
There shall thy wings, rich as an evening sky,
Expand and shut with silent extacy.
Yet, wert thou once a worm, a thing that crept
On the bare earth, then wrought a tomb and slept;
And such is man soon from his cell of clay
To burst a seraph in the blaze of day."

An American visiting England, in a recent interview speaking of the lawns, says: From Southampton to London the express train "whirls through the loveliest country I ever saw. Through green fields and across picturesque stone bridges, alongside grand old country seats, with their mighty oaks, and past lawns, oh, such lawns! There's nothing like those lawns in all the world outside of England, and when I saw them first I recalled the story of the Harvard professor who was visiting Canterbury and asked the old white-headed gardener how they made these lawns so thick and velvety. The gardener said they simply mowed them regularly and took care of them in winter, and occasionally seeded them down. 'Ah, is that all?' cried the American, delighted with the idea of having just such a lawn for the campus at Cambridge. 'Yes, that's all,' said the old man, 'and when you've done that for six or eight centuries you have a very decent lawn.'"

* * *

A big s'ab of redwood, a cross section cut from a log 14 feet 4 inches in diameter, with the bark peeled off, was recently shipped at San Francisco consigned to William Waldorf Astor, London, England, to decide a wager that a table big enough to accommodate forty at dinner could be made from a cross section of one of California's trees. The wager was accepted. The piece of redwood was cut from one of the many giant trees of Humboldt County. There is not a knot or blemish in the whole piece. It is about three feet thick, and weighs about nineteen tons, and is thoroughly protected to prevent warping or damage. Apropos, of the above the Hartford *Courant* says: The really great American tree of to-day is a big tree at Tule in Mexico, in the State of Oaxaca. That tree, cypress, still in full vigor and active growth, is 154 feet in circumference. If a section of this tree were taken for a table there is no house that it could be taken into. Mr. Astor proposes to put forty of his fellow Englishmen at forty-five front feet of table. That's the very tight squeeze of a foot and an eighth apiece. Similarly jammed you could put 136 people at the Tule tree table. Since the publication of the above, reports of a number of immense trees are finding their way into print.

THE LOVEJOY MONUMENT AT ALTON, ILLINOIS.

The Lovejoy monument at Alton, Illinois, illustrated herewith, was erected by the State of Illinois and the City of Alton jointly, by an Act of the Legislature of the winter of 1894-95. The sum of \$25,000 was appropriated by the State to be used in the construction and expended under the direction of the Lovejoy Monument Association, organized to erect a suitable memorial to Elijah Parish Lovejoy, the abolitionist. To this appropriation the City of Alton added \$5,000. Under the direction and supervision of the Monument Association, a contract was made with Robert P. Bringhurst, sculptor, of St. Louis, for a suitable design. He associated with him Louis Mulgardt, architect, who arranged the architectural details, Mr. Bringhurst himself taking care of the artistic features and a general supervision of the whole. The contract was awarded to the Culver Stone Company of Springfield, Ill., on May 23, 1896, for \$25,300. The site of the monument is on the bluffs in Upper Alton, one of the most commanding sites for such a structure that could be found. The monument itself is a massive granite column 90 feet high, surmounted by a bronze statue of Victory 17 feet high, weighing 8,700 pounds. This shaft, in three pieces, weighing respectively 16, 18, and 22 tons each, is one of the largest columns in this country. The base consists of a round plinth, square cap, die and base in the form of a seat. It stands in the

center of a terrace 40 feet in diameter, surrounded on three sides by a granite exedra wall 8 feet deep on outside, having a seat on the inside. The terrace is floored with 6-inch granite flagging and is reached by seven granite steps. Two large granite pedestals, surmounted by ornate standard bronze tripods, finish the exedra walls. By the steps are two granite sentinel columns 30 feet high, surmounted by bronze eagles 8 feet over the wings. A large bronze shield is set on all four sides of the die: a medallion of Elijah P. Lovejoy, with autograph, in front; on the rear a facsimile of the old Franklin press in the office of the *Observer* at the time of his death, with the inscription "The Observer Press;" The inscription "*I have sworn eternal opposition to slavery and by the blessing of God I will never go back,*" occupies one side panel, and on the other is: "*But, gentlemen, as long as I am an American citizen and as long as American blood runs in these veins I shall hold myself at liberty to speak, to write, to publish, whatever I please on any subject, being amenable to the laws of my country for the*



THE LOVEJOY MONUMENT, ALTON, ILL.

same." One tripod pedestal bears the following: "*Erected by the State of Illinois, and Citizens of Alton, 1896-1897;*" on the other: "*Dedicated, in gratitude to God and in the love of liberty, June, 1897.*" The name Lovejoy is placed in the back of the seat on the inside of exedra in granite letters about 15 inches high. With the exception of the bronze the monument is built entirely of light Barre granite.

PUBLIC GARDENS AND SQUARES.

In a lecture on the above subject given in London by Mr. Reginald Blomfield on "Public Gardens and Squares," and which we take from *The Builder*, the author said:

The point of view from which he wished to deal with the subject was not that of the technical designer; he wished to deal with it on a wider basis, taking it for granted that the designing of streets and public spaces was one branch of the family of art—not to be treated as a side issue, but rather as the last touch of civic architecture, as a problem that called for the patient thought that was necessary to any other expression of the human intelligence. The lecturer then gave a brief historical survey of the treatment of towns, considering the Greek and Roman cities, and specially referring to the broad and comprehensive scheme on which the Romans laid out their cities, after which he dealt with towns in the Middle Ages and at the time of the Renaissance. In regard to Wren's scheme for rebuilding London, he said that the fire was Wren's great opportunity, for the city was a ruinous heap. Had the scheme, which was worthy of such a genius, been carried out, the City of London would have been one of the most beautiful in the world, for Wren's fine intelligence grasped the full architectural possibilities of vistas of broad straight streets linked together by groups of public buildings, the importance of a commanding site for these buildings, and the absolute necessity of a complete and consecutive scheme to the dignity of a great city. Wren saw that patching was worse than futile, and that it was a question of a large idea or nothing. Other schemes which had been proposed from time to time had lacked comprehensiveness. As compared with the ancients, and the great masters of modern art, we had dropped far behind in our treatment of public spaces; so much so, in fact, that we seemed to have lost sight of the significance of this problem, of its extreme importance in the work of making our cities beautiful. What was the source of our failure? It was, he considered, to be found in the absence of any principle; in our incapacity to arrive at any dominant idea which would introduce logic and system into our chaotic practice. Wren had kept two main objects in view—firstly, to make the most of his buildings architecturally, and to provide fine vistas leading up to definite objects; and, secondly, to provide the most direct and ample thoroughfares to the chief places of public resort. The first of these principles had been overlooked by us, and the second, though recognized in theory, had, as a rule, been subordinated to other considerations. New streets had been planned with regard to convenience of building sites, to get over the difficulty of some obstinate tenure, and to avoid the heavy outlay involved in a clean sweep. Individual architecture was beyond control, but the laying out of streets was on a different footing, and if the authorities could make up their minds to some definite and consecutive idea in this matter, something could be done to redeem the streets from their prevailing significance. If, for instance, streets were laid out solely with regard to convenience of traffic, we should at least have the em-

bodiment of an idea; there would be something that appealed to the imagination in the consciousness of a principle of some kind manifest in every detail. The railway terminus would be the point of departure, and instead of the mean approaches which lead into some of our great railway stations, wide open spaces would be reserved in front of them. Perhaps the sanest method of dealing with a great city would be to determine on the buildings which were of absorbing interest and public importance, and, taking these as data, so to lay out all future streets and public spaces as to make these buildings central features, and to bring them into relation with each other. By this means one building would help another, and instead of the series of abrupt shocks to our æsthetic sense, which was all that our cities provided for us, some continuous impression would be possible of a great and beautiful city.
 * * * The design of streets and public places was undoubtedly a matter of intricate difficulty; but in the case of public gardens or parks, where there were no vested interests to deal with, no questions of traffic to meet, we were hardly more successful, and recent work was inferior to that of thirty or forty years ago. The most distressing features about our public gardens were the cast iron seats, the fountains, bandstands and refreshment places. If the necessary money for this work were not forthcoming at once, it would always be better to wait until it should be, rather than to attempt to turn out a park ready made. Really good work of this kind would be a lasting pleasure to every one, and as we had in England to-day sculptors for whom little work was to be found, surely it would be a wise use of public money to employ such men to beautify our parks and avenues, instead of wasting it on merely commercial fittings. Our cities were deficient in sculpture; we put up statues in fits and starts to our great soldiers and statesmen, but we nearly always put them in the wrong places. The right place for a statue was in some place of rest and quiet, where its immobility was not outraged by the rush of modern life, and parks and public gardens could offer them this decent refuge. The most advanced thought in this matter was that which puts itself back. We had lost our sense of proportion, we had less understanding of the grace of life than our forefathers, less knowledge of how to make our surroundings comely and reasonable, and we should not find the way to this by desperate attempts at making our art and our language modern. In so doing we only made it vulgar. We should have to search again for tradition to recover that fine selection, that subtle sense of proportion which were the first elements of style, for the power of rejecting the irrelevant and unessential, until we had arrived at an understanding of what art is, and what it may do for us in our lives; the art that could bring order, and thereby dignity, in the countless aggregate of buildings which help to make up a city.

The largest building stones are those used in the cyclopean walls of Baalbee, in Syria, some of which measure sixty-three feet in length by twenty-six in breadth, and are of unknown depth.

FALL FLOWERING SHRUBS.

The beauty, generally speaking, of flowering shrubs and their use in landscape gardening has given to their cultivation and care a large importance. In *American Gardening* Mr. Edward J. Canning gives the following notes on autumn flowering shrubs from the Botanic Gardens of Smith College, Northampton, Mass.:

Desmodium penduliflorum is one of the very best autumn flowering shrubs we have. It is of dwarf bushy habit, being not more than four or five feet in height. The stems are well clothed with trifoliate leaves, the lower leaflets being some three inches long by one and one-half inches wide, while the upper leaflets are small, not more than an inch in length. The rosy purple, pea-shaped flowers are produced in the greatest profusion on long, leafy drooping panicles, and are very showy at this date (September 26). The variety *alba* is also good, but with us it is not as free flowering as the *penduliflorum*. Both die back to the ground each winter, but seem to come up more vigorously every spring. It is a most useful subject either in masses or in the front line of the shrubbery border.

We have a mass of the Groundsel tree (*Baccharis halmifolia*) in flower just now on a grassy hillside, and it is very effective. It is called the Groundsel tree because the flowers are like those of the common Groundsel, consisting chiefly of a white pappus. It also belongs to the same family (compositæ). It is of an upright, bushy habit and grows about five feet in height with us. The leaves are small, obovate in outline, with coarsely-toothed edges. The flowers are borne in large terminal panicles and flowering at this season it is worth a place in every collection.

Comanthospace sublanceolata is a sub-shrub belonging to the Mint family, and a native of Japan. The leaves are opposite, lanceolate, four inches long by one and a half wide. The stems are much branched towards the summit and about three feet in height. The flowers are yellow, and are produced in spikes three to six inches in length on the ends of all the branches. I believe it to be perfectly hardy, but as we only received it last year, we gave it a slight protection last winter until we could prove its hardiness. For the front line of a shrubbery border, or planted in a mass, we consider this a useful shrub.

Berchemia volubilis, the common Supple Jack, is attractive just now with its terminal panicles of cream-colored flowers. It is a good subject for climbing over stone walls or fences, or covering up unsightly places.

On a hillside, where we have a number of ericaceous plants grouped, a mass of the Scotch Heath (*Calluna vulgaris*) has been very attractive for some time past; the bright green foliage and tiny bell-shaped flowers are very pretty. *Erica vagans* is also a charming plant for grouping; it is of much stiffer habit than the Scotch Heath, with pink flowers rather longer than those of the Scotch Heath. We protect these two Heaths in winter with a few leaves among them and a few Hemlock or Pine branches over them. For propagating we lift and pot two or three plants of each, cut them back, and after they have become established in their pots place them in a moderately warm greenhouse. Fresh young growths soon appear, which as soon as the tips become just "firm," are taken as cuttings and inserted thickly in shallow pans filled with white sand and pressed firmly. The pans are plunged in the propagating bed, and a bell glass placed over them.

The moisture which collects in the bell glass must be wiped out once or twice a day. As soon as the cuttings begin to make roots, admit air by tilting the bell glass and as soon as rooted remove altogether. The cuttings generally take about three weeks to root. We propagate all our Heaths in this manner, and although there may be other admirable methods of propagating Heath, we can generally root 99 per cent in the way I have stated.

Although this garden has only been established little more than four years, we have now growing over 4,000 shrubs in about 375 species. They are grouped in families in natural sequence around the college buildings in other parts of the campus. In addition we have planted some 200 different species of trees and conifers, and about 1,200 different species of hardy flowers. Seven greenhouses have been built, including a large Palm house, and are now well filled with a large variety of plants both of botanical and ornamental interest.

Fall Planting of Perennials.

Amateurs in gardening naturally feel some hesitancy about transplanting herbaceous plants in the fall; there is an uncertainty that is only dispelled by the results of experience. Those plants that are understood to be perfectly hardy have but one thing to fear, viz.: The continual upheaval of the soil in the action of freezing and thawing. The roots are not damaged by being frozen so long as they remain unexposed to air and light, that thawing may take place gradually.

Dealers occasionally receive boxes of plants that have been "caught" en route by severe weather. Upon opening the box the presence of frost is at once noted, and instead of unpacking the goods, the lid is closed and the whole thing placed in a shelter devoid of artificial heat, yet sufficiently mild to permit of a gradual thawing of the frozen contents. In a few days time the plants, uninjured, may be removed. If, on the other hand, they had been at once removed and exposed to a rapid process of thawing by heat, they would almost certainly be seriously injured.

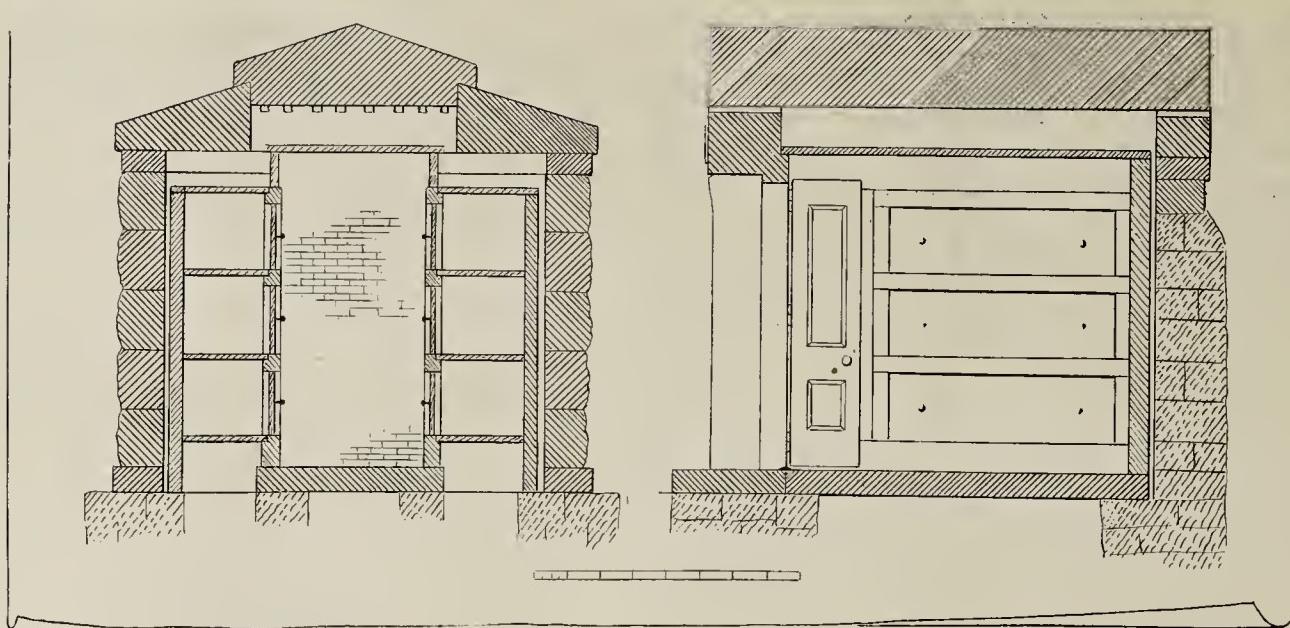
It is a similar case when shallow-rooted plants are "thrown up" by the continual freezing and thawing in the soil, finally becoming partly exposed to the air and sun-heat. Then it is that the damage is done.

Mulching is a perfect safeguard. The roots are placed further from the reach of frost and sun-heat, resulting in a more even temperature.

The choice of material to use for mulching is greatly a matter of convenience. Stable manure containing plenty of straw is perhaps the most generally used for the purpose. Dried leaves weighted down by boughs of trees are excellent; corn-fodder is likewise used. The transplanting of most plants may take place in any fall month, though an early one is preferred, with a few exceptions, as they become better established before winter weather sets in.—*Meehan's Monthly for October*.

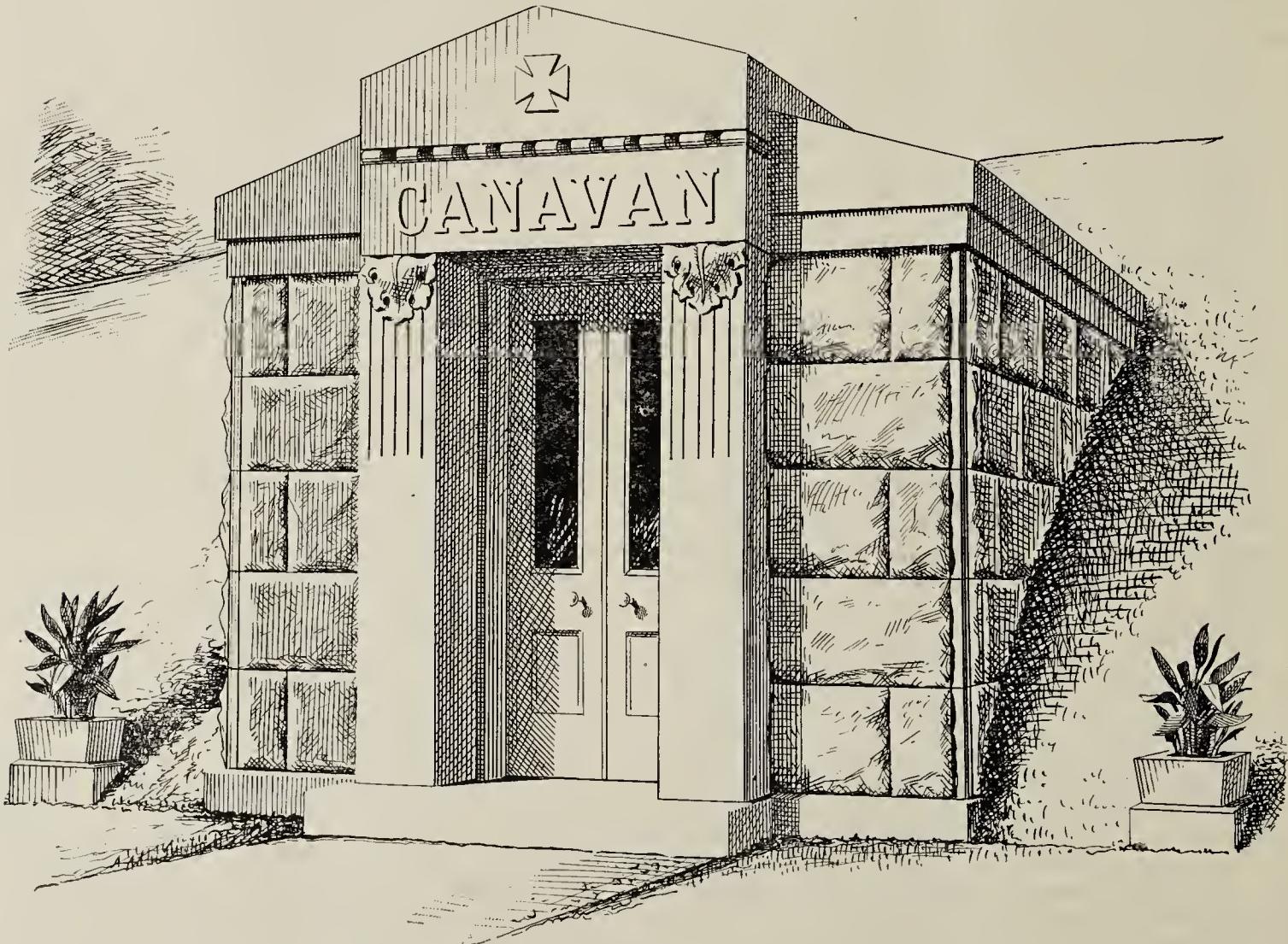
The crocus is one of the most ancient floral names. It was used by Theophrastus, born about 372 B. C. He gives the name as of Chaldean origin.

The forest area of the United States, according to a recent official report, is 500,000,000 acres, not including Alaska.



TRANSVERSE SECTION.

LONGITUDINAL SECTION.



DESIGN FOR A SIDE HILL VAULT.

DESIGN FOR A SIDE HILL VAULT.

The accompanying illustrations show the general design and arrangement of a vault intended to be constructed in a side hill. It shows a neat, substantial and dignified structure, with every appearance of stability and permanence. There are many of our smaller cemeteries where such a building

might be erected to serve the purpose of a receiving vault, for if the capacity is insufficient, the design admits of extension further into the hill, provided absolute care is taken to secure proper drainage and ventilation, the two great necessities in vault construction. The design herewith has the merit of being economical in cost.

* PARK NOTES. *

A suggestion is conveyed in the recent activity of the Needham Improvement Association, which held a public meeting and entertainment in the town hall of that Massachusetts town, at which Hon. Charles J. Noyes of Boston delivered an address in connection with a musical and literary entertainment. More or less money can always be raised in such entertainments when pleasure and profit combine as an incentive to liberality. And moreover, many prominent public men will gladly help a good cause when occasion permits.

* * *

One feature rather surprising to an American is that every park in Birmingham, England, is made for use, says *The Century*. "There is no fear lest the grass may be injured, but in every ground adapted for them are cricket and football fields, picnic grounds, croquet lawns, tennis courts, bowling greens, the use of which is permitted for a merely nominal payment. Every park, large or small, has one or more concerts each week during the summer, paid for by neighborhood subscription. Less need exists for large parks than in American cities of the same size, because the better class of houses all have ample gardens."

* * *

Among the improvements approved by the New York Park Commissioners is the erection of a "pheasantry" forty by sixty feet, in connection with the menagerie, to cost about \$1,500. The plans for the improvement of Poe Park have at last been adopted, and \$10,000 are to be spent on the park around the old home of the famous author. A bronze tablet will also be placed near General Grant's tomb on Riverside drive, with an inscription in Chinese and English to the effect that Li Hung Chang had a tree planted there to the memory of General Grant.

* * *

The advance in public taste is growing so marked that the necessity of placing all public improvements under the supervision of competent commissions to insure the preservation of natural beauties, as well as to secure artistic harmonies in added ones, is becoming apparent on both sides of the Atlantic. Lord Londesborough in the London *Times* called public attention to the vandalism under the title of public improvements being perpetrated at Scarborough, England, on the beautiful Castle Hill in the construction of a road, in spite of the protests of citizens, and *The Garden of London* points to the curbstone edge to the river Thames at Richmond, marring so sorely that beautiful locality.

* * *

Notwithstanding the vigorous protests which have been made in the past against the destruction of the Palisades of the Hudson River by quarrying operations, the work goes on. By a recent explosion the crag once known as "Washington's Head," about a mile above Fort Lee, was shattered from top to bottom. As the Philadelphia *Record* says: "This assault upon one of the most picturesque features of the American continent is disgraceful, and should be stopped. The Hudson River has been not altogether unhappily styled the American Rhine, but the Palisades are even finer than the Rhenish cliffs. There ought to be public spirit enough and energetic action enough in East Jersey and in the city of New York to stay the hands of those who are so ruthlessly tearing down the noble old ramparts."

* * *

It is a gratifying sign of the times and a harbinger for future

development to find our noted park superintendents realizing the value of popular education in plant and garden cultivation. Superintendent William Falconer of Schenley Park, Pittsburgh, Pa., whose work in the field of landscape gardening is so well known, has been devoting himself to creating a popular interest in the subject of cultivated flowers. He is now giving exhibitions, accompanied by talks on flowers, at the monthly meetings of the Western Pennsylvania Botanical Society, which are held in Science Hall of the Carnegie Library, the first Thursday of each month at 8 p. m. At a recent meeting a general exhibition of flowers in bloom was given, and especial attention paid to tropical water lilies and ornamental fruit shrubs. A great deal of interest is manifested, and there is no question of the power of such work in building up a permanent sentiment on the pregnant subject of home and park development.

* * *

Preparations are making for the early construction of the buildings for the Botanic Gardens at Buffalo, N. Y., and the plans and specifications promise a handsome plant. The center dome of the range of greenhouses will be sixty feet in height. Prof. Cowell is giving much attention to a complete rockery, the main idea being, a correspondent in the *Florists' Exchange* says, to place the plants in the most favorable situations more than the formation. The herbaceous border is being extended 500 feet. The appreciation shown during the past summer has inspired Mr. Cowell to extend the area for this interesting class of plants. The majority are now past blooming, but I saw in the distance a showy bed of the blue verbena Venosa, its color of cærulean blue is most pleasing to the eye; the common aster is at its best. Of cannae, Papa is the favorite this season; it looks proudly over some handsome seedlings raised here. A border of *Yucca filamentosa* around the canna beds illustrates the good use to which this plant can be put.

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To promote a more general knowledge of native trees and shrubs Prof. C. S. Sargent of the Arnold Arboretum, Boston, has arranged a series of lectures and meetings to be held on the grounds, the first of which was given September 18 in the hall of the Bussey Institution. Mr. J. G. Jack is the lecturer. The announcement of the proposed course does not propose to make it technical, but to instruct by comparison the easiest means of distinguishing the common native trees and shrubs as they appear in that part of the country, and to recognize the foreign species which have been introduced into our gardens. The ornamental and useful properties of these trees and shrubs, their habits of growth and other peculiarities may be considered; and particular attention will be given to their identification and general aspect as they lose their leaves and prepare for winter. As an indication of the methods pursued it may be mentioned that Mr. Jack in the lecture made use of numerous colored charts, diagrams, sections of tree trunks, branches, bits of bark, etc. The composite parts of trees, heart, sap and bark, were discussed, and it was explained how the age of a tree can be determined by the rings and how the branches always grow from the tip. He told how a hollow tree can be healthy, and that it would die if the outside is injured and the tissue destroyed from which its life comes. Other general characteristics, such as the size, shape, color, taste, odor, etc., were alluded to, and it was shown how autumn is a more advantageous time for such field study as will be undertaken now than spring on account of the ease of identification of varieties. The following dates have also been filled: September 22, maples and cherries; September 29, thorns, locusts and hollies; October 2, ashes and sumachs; October 6, walnuts and hickories; October 9, cornels and viburnums; October 13, elms; October 16, oaks.

CEMETERY NOTES.

The women interested in the Oak Hill cemetery of Nunda, N. Y., have formed a society for the purpose of securing funds to be applied in renovating and beautifying the cemetery. Mrs. Grace Dresher is secretary of the association.

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The Council Committee on cemeteries of Richmond, Va., at a recent session considered the plans for extended improvements in Oakwood cemetery. Among improvements to be made will be the construction of an artificial lake and the equipment of a water system.

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A suit has been commenced in the Court of Common Pleas, by a Mrs. Maria Morlock of Washington township, Ohio, against the Bishop of Cleveland, St. Wendelin's Catholic church of Fostoria, O., and its cemetery trustees, to restrain the defendants from establishing a cemetery adjoining her premises on the north ridge road, in said township.

* * *

The Sheboygan, Wis., cemetery commissioners have been seriously wrought up by the unseemly conduct of the curious at recent prominent burials. To avert such scenes and destruction in the future, they have provided portable posts and chains to secure a forty feet enclosure, within which none but interested relations and friends will be admitted during interments.

* * *

A New York syndicate has purchased a tract of about 100 acres of land in Bucks county, Pa., just across the Philadelphia county line from Somerton. A cemetery will be established at this place and arrangements made to run funeral trains each day. Woking cemetery, England, and others in the same country are conducted on this system. The one to be established in Bucks county will be the only one of the kind in the United States.

* * *

Hollywood cemetery, Atlanta, Ga., has been sold by the receiver on the order of the Court. The cemetery is located on the Chattahoochee car line, having been located there about fifteen years ago. The property consists of 80 acres of land and the grounds have been improved and divided into lots, and it is estimated that about 1900 lots have been sold. There have been 500 interments. The lots which have been purchased by individuals for burial purposes will not be affected by the sale.

* * *

A minister once asked a sexton why he bestowed more pains on the smaller graves than the larger ones, and the old man's reply was: "Sir, you know that it is said of children. 'Of such is the kingdom of heaven,' and I think that the Savior is pleased when he sees so much white clover growing around these little graves." But when the minister pressed the sexton for a more explicit answer he said: "Sir, about these larger graves I don't know who are the Lord's saints and who are not; but you know, sir, it is different with the bairns. They are all his."

* * *

The work of transforming the old St. John's burying ground New York City, into a park is in progress. More than 900 ancient tombstones were buried, on many of which were cut names that were once well known in New York. Five thousand bodies were buried in the cemetery. The Trinity corporation fought hard for the old burying ground, but was finally defeated and obliged to accept \$520,000 for the land. A number of the bodies were disinterred and removed, but the others remain undisturbed. It is said that one New Yorker whose kindred's graves were to be

covered by a walk, obtained a modification of the plans, by which a flower bed will be above the bodies. The old cemetery is now but a history.

* * *

The Bellefontaine Cemetery Association of St. Louis, Mo., was incorporated in 1849, and embraced by its first purchase 138 acres. Additions have been made from time to time until the present area comprises 332 acres. It is not a stock company and the proceeds of sales are devoted to maintaining the grounds in order and any surplus is invested as a permanent fund for the maintenance of the cemetery after the lot sales cease. The Board of Trustees serve without compensation and the association is non-dividend paying. An original owner cannot sell his lot if there are any interments on it and no deed from him for such a lot is valid. The beauty of the grounds has been immensely improved recently by the removal of between one and two hundred of the old-time iron fences and a number of the stone copings, and it is hoped to continue this work and create of Bellefontaine an ideal modern cemetery.

* * *

Speaking of crematories the *New York Tribune* says: It is noteworthy that though in each of the American crematories more men than women have been cremated the movement abroad was practically begun by women, Lady Dilke of England and a German woman having been cremated at Dresden. When efforts were made in the years 1873-4 on the continent of Europe, in England and in the United States in favor of the cremation of the dead, Lady Rose Mary Crawshay was one of its prominent advocates. A number of well-known women in this country have expressed themselves decidedly in favor of cremation. Among them are Olive Thorne Miller, Mrs. Lippincott, Mrs. J. C. Croly, Mrs. Ella Wheeler Wilcox, Mrs. Alice D. LePlongeon, the late Kate Field, Rose Elizabeth Cleveland and Edith Thomas. At a public meeting Mrs. Ballington Booth referred to the time when her body should be carried to the crematory. The total number of cremations in the United States from 1876, when the first crematory was established, to the close of 1895, was reported to be 4,647. The number of men cremated in New York is more than double the number of women.

* * *

If ever there was a cemetery unfortunately situated, it is that of Oakwood, at Berlin, Wis., if the *Journal* of that place in a string of terse paragraphs correctly describes the situation. The old cemetery was started many years ago by an association for that purpose, which seems to have soon died out and left its care to individual lot owners. Later more room was required and an addition was platted by an individual, and later still in a similar way another piece was added. "Practically there has never been, for the past forty years at all events, any organized head to the Berlin cemetery. There has been no one to make any public improvements. For several years the city has taken charge of the place and has done more, or less, according to the ideas of the committee that have been appointed. This year the committee has done a good deal" and is blamed therefore. In other years all that has been done has been to allow some one to cut the grass for the hay. A certain class declare that the city deriving no benefit from it should not appropriate funds for its care, but the clamor of those owning lots have led the council to spend more or less every year. The *Journal* claims that if the community demands that the city should continue its care, it should be done regularly and in a business like' way, but advocates and urges the formation of an association to conduct the cemetery affairs properly and remove it from the uncertain and devious ways of individualism. The *Journal* is right and the condition of Oakwood cemetery, Berlin, Wis., reflects in no uncertain way on the citizens of that town if the facts are as stated.

Lake View cemetery, Cleveland, O., is instituting a thorough course of improvement. Considerable work has been done during the past six months in the way of road repairs, extension of water service, grading, etc., and the trustees upon the recommendation of the president at the last quarterly meeting authorized the employment of a competent landscape gardener to make a general plan for the improvement of the entire three hundred acres of ground held by the association, the intention being to at once commence the development of certain portions of the cemetery in accordance with an ultimate plan. It is in this cemetery that the Garfield monument is situated which although an attraction affords no pecuniary returns to the cemetery association, on the other hand it involves considerable expense in maintaining the surroundings, due to the number of visitors.

* * *

The trustees of Dell Park Cemetery, Natick, Mass., have ordered a survey and plat of their grounds, consisting of sixteen acres, preparatory to grading, which will be commenced on completion of the preliminary work.

Public spirited citizens of Newark, N. J., have inaugurated a project to place artistic fountains in its public parks, funds for which are to be collected from liberal citizens, and the scheme is already bearing fruit. The list includes four parks. It is hoped to obtain \$2,500 for each fountain. The leaders in the movement are enthusiastic in their faith that the idea can be carried out, and a pleasing feature added to the public appearance of Newark.

* * *

Spades and shovels, together with scoops, are found depicted on the walls of Egyptian catacombs, and all three are frequently mentioned by Roman and Greek agricultural writers.

* * *

London is better off for trees than any other city in Europe.

CONVENTION ECHOES.

LYNN, MASS., October 6, 1897.

Park and Cemetery.

Our tenth annual convention has come and gone, and every one who was present must be gratified with our association. We saw much and learned much and eighteen new names were added to our membership. Bro. Salway could do no more, and his many kindnesses will be long remembered. We could not blame him for the heat, but he was equal to the emergency, and we found our meeting on the roof much cooler,—not the meeting but the weather.

The day spent in Dayton proved that another member, Mr. Cline, was an adept in the art of entertaining.

A warm invitation from the superintendent of Riverside cemetery, Defiance, O., Mr. G. W. Bechel could not be resisted, and on Saturday morning I made the trip of 164 miles, in company with two other members, I arrived at Defiance to find Mr. Bechel in waiting at the station. During my two day's visit I saw many points of interest in the city, and of course visited Riverside cemetery. I was much pleased with the appearance of the grounds, and the handiwork of the superintendent was apparent in all directions. Many varieties of trees have been planted which when they mature will be objects of interest. A pretty chapel stands near the entrance and between that and the gate is an attractive lily pond which contained many varieties of *Nymphaeas* in bloom. A short distance to the left is a flight of rustic steps leading to a ravine, with another pond, which is to be given over entirely to the varieties of *Nelumbiums*. I rather envied my fellow superintendent that ravine, for there is such an opportunity to assist nature in the construction of a

beauty spot. I offered him plenty of granite boulders, but we could not trade. Mr. Bechel has many ideas in view, which will be consummated if circumstances permit.

I left Defiance with regret, very grateful for the courtesies shown me, and hastened back to my home by the sea, heavy laden with pleasant thoughts, and at once turned my attention to my daily duties.

William Stone.

* * *

Cincinnati—Dayton.

Park and Cemetery,

Convention is over! Editor Haight, always a welcome guest, who has contributed in a far greater degree than has hitherto been appreciated, or he has been compensated for, to the welfare of the association and the interests of all parks and cemeteries throughout the land says: "In point of numbers it was the largest gathering in its annals." This fact may be accounted for in that the visit was, with many other members like myself, who had never had the privilege of seeing the works of the celebrated Strauch as they appear in one of his masterpieces, which the far-famed "Spring Grove" is, the satisfying of a long cherished desire. We were not disappointed, but treated with and feasted upon the richness of true landscape art as we gazed on natural beauties rendered almost supernatural, not alone in "Spring Grove," but "Woodlawn" and "Calvary," the latter a most gratifying and striking exception to the appearance of the great majority of Catholic cemeteries, which in general are not worthy of a visit, unless it be to behold specimens of neglect. The large number of parks visited, together with a view of the spacious grounds attached to many inter and suburban residences, afforded abundant instruction to those of us who were students upon the way. Long shall we cherish in grateful memory the hospitable reception of Henry Probasco, Esq., one of America's noblemen, who greeted us with his thoroughly practical address, which I am glad to see published in your last issue, and trust it may appear in our "Proceedings," there to be connected and treasured with the history of our association.

It is not my purpose to intrude too far on your valuable space. You have given a very comprehensive account of the meeting. The "general resolutions," although according to our genial St. Louis brother they may be devoid of the "soul and wit," form an historical value where brevity "fails." A few members claimed that "Brazil" wore a funeral aspect and accounted for it in that he feared Salway, Cline and Stephens had determined to outdo the great '96 convention in point of entertainments, while others said it was because McCarthy was conspicuous by his absence. Speaking of McCarthy, after I had bored him by mailing numberless letters and newspapers, I finally extorted from him just one report, in which he condescended to say: "How do you manage to keep yourself so extensively advertised?" Not a ripple of discord marred our gathering, which almost resolved itself into a mutual admiration society. The estimable wives of our worthy president and secretary were of the opinion that all members should be accompanied by their wives, and not only by their sons, as were Brother Transue and myself. Brother Mayer was guarded by both. The "Great Scott" touched the keynote when, in his speech at Dayton, he said Creesy, others and himself acknowledged that it was with them a necessity to bring along their wives to restrain any possible over-enjoyment of the memorable convention of 1897.

"Father" Nichols once wrote you, "Where is Brother Stone? Why don't he write for the PARK AND CEMETERY any more?"

Now, where are the many others who ought to write? Will Mrs. Hay respond? She has the ability.

B. D. Judson,
St. Agnes' Cemetery, Albany, N. Y.

PARK AND CEMETERY.

Association of American Cemetery Superintendents.

G. W. CREESEY, "Harmony Grove," Salem, Mass., President.
ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., Vice-President.
F. EURICH, Woodlawn, Toledo, O., Secretary and Treasurer.

Publishers' Department

Park Commissioners and Cemetery trustees are requested to send us copies of their reports.

Photographs and descriptive sketches of interesting features in parks and cemeteries are solicited from our readers.

At the Fall show, next month, of the Chicago Horticultural Society, instead of the Japanese art exhibit that was a prominent feature of last year's exhibition, the Society has made arrangements with a number of the well-known artists of Chicago, by which the latter co-operate in an exhibit of painting, sculpture and other artistic efforts. One corner of one of the halls will be arranged by them with pictures and statuary and it is expected that the new order of a combined flower and art exhibit will attract wide attention.

It is proposed to hold a Congress of Agricultural Industries in Omaha, Neb., next year during the Exposition. It is expected to comprise representative delegates from State Boards of Agriculture, farm journals, horticultural societies, dairymen's associations, live stock breeders' societies, and organizations related to husbandry and its sessions may occupy three or four weeks. At this time the American Association of Agricultural Colleges and Experiment Stations, American Nurserymen's Convention, the Dairymen's National Association, and other associations of allied interests will hold their annual conventions. The managers have been assured of the co-operation of Secretary Wilson, Department of Agriculture.

A Good Idea.

The ladies of the Twentieth Century Club, Fayette, Iowa, have been requested to co-operate with the Trustees of the Fayette Cemetery Association for the purpose of improving and beautifying the Fayette Cemetery Grounds and a committee has been appointed with instructions to ornament and improve the cemetery as they think best, with the approval of said Trustees of the Association. Twelve acres of land have lately been purchased. The committee will also solicit funds to secure a wind-mill, tank and well and other improvements, as well as donations of urns, and other decorative and useful ornaments, chairs, settees, etc. The

corresponding secretary is Mrs. Nora Graf.

Obituary.

WILLIAM A. STILES.

William A. Stiles, well-known in many lines of work, but particularly so of recent years, as a Park Commissioner of New York City and managing editor of *Garden and Forest*, passed away on the morning of Wednesday, October 6th. Abdominal cancer was the direct cause of his death. The following epitome of his career tells the story of an unusually active life, whose work has directly benefited his fellow man.

Mr. Stiles was born at Wantage, N. J., in 1837. He graduated from Yale College in 1859, and later taught in his fathers' school, Mount Retirement Seminary. Subsequently he spent several years in California as a young man, and was for a time a member of the engineering corps of the Union Pacific Railway. Later he dropped into politics. He was a Republican, and ran for Senator in 1880 and '83, but was defeated both times. He filled the office of clerk in the New Jersey State Senate in the years 1882-'84 '85, and was at one time United States gauger in New York City. Drifting into journalism, he became a member of the staff of the New York *Tribune*, and acted in the capacity of agricultural editor of the Philadelphia *Weekly Press*. In 1888 he became managing editor of *Garden and Forest*, under Professor C. S. Sargent by whom that journal is still conducted.

Mr. Stiles was appointed a park commissioner for New York City, by Mayor Strong in 1895, in which office he rendered valuable service, having given the subject of park making careful study. His name has been prominently before the public recently in connection with his determined opposition to the adoption of the proposed plans of the Botanical Garden as submitted and amended by the Botanical Society.

From early youth he displayed those characteristics which have marked his life—a love of study and intellectual development, crystallizing into an individuality that made him a man of mark in whatever he undertook. As a public speaker and as a writer he was well-known, and his knowledge of trees and plants and a cultivated taste in landscape art, will cause a keen and widespread regret that the great reaper did not pass him by for yet a little while.

RECEIVED.

Kinkead Cemetery Association, Alexandria, Minn. By-laws, Rules and Regulations, as Revised and Adopted April 8, 1897, with statutes of the State of Minnesota pertaining to cemeteries.

From Mr. Sid. J. Hare, Supt. Forest Hill Cemetery, Kansas City, fourteen photographs of views and incidents connected with the recent convention of the A. A. C. S.

From Mr. F. A. Sherman, Supt. Evergreen Cemetery, New Haven, Conn., a number of photographs of Spring Grove Cemetery, Cincinnati, and other features connected with A. A. C. S.

Mr. P. A. Macomber, Clerk of Cemetery Board, City of New Bedford, Mass., photograph of New Receiving Vault recently completed in the Rural Cemetery.

CATALOGUES.

Highland's Nursery. 13th year, 1897-98.

Hardy American Plants. Harlan P. Kellogg, 1123 Tremont Building, Boston, Mass. The office has been removed from Keewana, N. C., to above address.

1897-1898. T. V. Munson & Sons Nurseries, Denison, Texas.

Fall Bulb Catalogue, American Bulb Company, successors to Bulb and Seed business of Pitcher & Manda, Short Hills, N. J.

Select Catalogue of Horticultural Books, treating on the cultivation of Fruits, Flowers, and Vegetables, the study of Botany and Horticulture in general, and also including the best works published on allied Industries and Pursuits. A. T. De la Mare, Ptg. & Pub. Co. Ltd., Rhinelander Building, New York.

Descriptive Catalogue of Ornamental Trees, Shrubs, Vines, Evergreens, Hardy Plants and Fruits. Illustrated. Fall 1897.—Spring 1898. Thomas Meehan & Sons, Nurserymen and Landscape Engineers, P. O. Station "G," Germantown, Philadelphia, Pa.

This is the 31st edition of Messrs. Meehan's catalogue, and it goes without saying that it is kept quite up to date. The nursery has really been in existence for 45 years, and the policy adopted in the beginning has steadily matured with the passing years, and was wise in its inception and has been wisely prosecuted ever since, if an established reputation for reliability and progressiveness stands as a guarantee. As has been before observed in regard to this annual production, it is, so far as its contents go, and these cover a wide extent of plant life, a valuable practical botanical reference book, giving the necessary information as to size, character, hardiness and other features of the trees and plants it lists, and its chapters of advice in regard to the pruning and care of plants, and suggestions on landscape gardening are worthy of adoption in all ways. The nursery stock is a large and complete one, collected, cultivated and prepared for distribution on scientific principles and practical knowledge.

Like the Colors of the Rainbow. Edging Plants coming from Pampas Grove, Greenland, Fla., charming, bright, compact growing foliage plants. Send for a list or 10 cents for sample dozen.

New York Gardener's Society.

The New York Gardeners Society's first Annual Dinner and Horticultural Exhibition, took place at the Grand Central Palace, New York City, on the evening of Sept. 11th. and was in every way a pleasant success. Some 70 prominent private gardeners and commercial horticulturists participating.

The dining table, which was handsomely decorated, was arranged in the centre of the exhibits and the gorgeously brilliant colors of cannae, dahlias, gladioli, numbers of herbaceous flowers and delicate orchids, set amid graceful ferns, all combined to make a magnificent frame to the festive board, and savor a bountiful menu.

Among those exhibiting were C. W. Ward, Queens, Long Island, with a collection of 50 of the best varieties of can-



Advertisements, limited to five lines will be inserted in this column at the rate of 50 cents each insertion, 7 words to a line. Cash must accompany order.

Wanted a position as Superintendent of a cemetery by a young married man; who is a good Landscape Engineer with several years experience. Would prefer a new cemetery or one that has considerable new ground to develope. Can also act as secretary in connection with superintendentship. Best of references both as to character and ability. Address C. C. R., care of PARK AND CEMETERY.

Thoroughly competent Superintendent of many years' experience, at liberty Oct. 1, desires engagement. Address Superintendent, care Park and Cemetery.

nas, some 50 varieties of dahlias, and a large collection of geraniums. W. A. Manda, South Orange, N. J., exhibited a fine group of brilliant co'ored caladiums and several vases of the new canna, "Manda's Ideal" and "Robert Christie." G. B. Winslade, Mamaroneck, N. Y., showed a bench of outdoor flowers including a special strain of Zinnias, of immense size and very bright. A. L. Marshall, Pawling, N. Y., a canna enthusiast, exhibited some 50 vases of as many varieties of new seedling cannae, raised by himself.

James Hill, gardener to H. M. Brooks, Newport, R. I., sent a grand flower spike of a rare Bromelia, name unknown, very interesting to all present. Robert Laurie, gardener to C. Vanderbilt, Newport, R. I., exhibited vases of Acidenthera bicolor, a pretty and popular flower with Mrs. Vanderbilt, and a seedling Tritoma raised by Mr. Laurie which differs from T. Uvaria by being freer flowering and a shade lighter in color. Bager and Hurrell, Summit, N. J., and Robert Angus of Tarrytown on Hudson, N. Y., displayed some fine orchids. Henry A. Dreer, Riverton, N. J., sent a vase of gorgeous night blooming Nymphaeas. W. P. Peacock, the dahlia specialist of Atco, N. J., displayed 70 varieties of single, cactus, pompon and large show dahlias. W. G. Eisele, West End, N. J., exhibited several vases of new seedling cannae, one with variegated foliage. Other exhibitors were A. T. Brill, Pawling, N. Y.; Richard Brett, Yonkers, N. Y.; A. J. Wengerter, Bay Ridge, N. Y.; Andrew Grierson, Rye, N. Y.; John Lewis Childs, Floral Park, N. Y.; A. Welsing and Chas. Zeller, Brooklyn, N. Y.; James Kirby and John M. Hunter,



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233 MERCER STREET, NEW YORK.

Hempstead, L. I. Great interest was centred in two exhibits just to hand by the steamer Campania, one being six specimen celery plants almost four feet high, and of fine quality, grown by C. All-dred, dahlia grower, Tyldesley, Lancashire, England, and a collection of vegetables from J. Scott, Liverpool, England. At the regular meeting which was held shortly before the dinner, a communication was received from ladies of New York, desiring the co-operation of the Society in giving a grand Floral Exhibition in November, in aid of the hospitals. The exhibition committee was empowered to make the necessary arrangements. It was also announced that Mr. John E. Lager, the orchid collector, would deliver a lecture at the next meeting of the society, on October 9th. Subject "Orchid Collecting, or Two Years in the Wilds of South America. [This paper reached us too late for use in this issue.] Jas. I. Donlan.

An Ornamental Grave Lining.

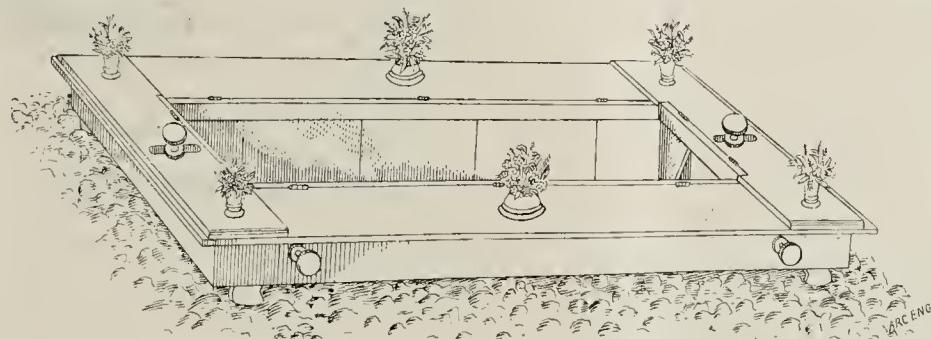
The illustration herewith, which explains itself, shows Knarr's Patent Orna-

it can be used on a hill side as well as on level ground, and, moreover, it can readily be handled by one man. The frame makes a complete finish around a grave, which it fits neatly and prevents from caving in. In cemeteries where graves are usually lined the use of this apparatus will modify many inconveniences.

Two sizes of these linings are made to adjust to a rough box from 3 to 5 or from 5 to 7½ feet.

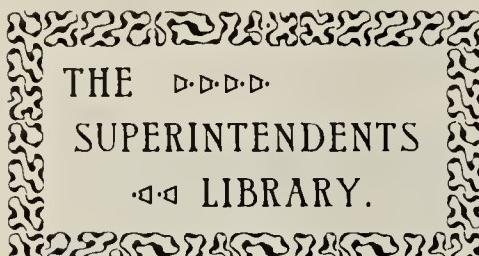
It is constructed of poplar and chestnut, in a thorough and durable manner. The knobs, adjustable screws, tie rods, butts and bouquet vases are made of brass, triple plated. The frame and panels are finished with nine coats of paint.

The Manager of Circle Hill Cemetery, Punxsutawney, Pa., says after using Knarr's Patent Grave Lining: "Knarr, the inventor of the grave lining made a rough set of lining about two years ago and placed them in Circle Hill Cemetery, and I am safe in saying that we lined in the last eighteen months at least 90 per cent. of the graves opened in our cemetery, and the people did not object to paying the extra charge for lining the grave."



mental Grave Linirg, placed about a grave complete and ready for a funeral. In operation it takes but a few moments to adjust it to any size of rough box, and

It is manufactured by the Ornamental Grave Lining Co., Punxsutawney, Pa., from whom any further particulars may be obtained.



Lawns and Gardens. How to beautify the home lot, the pleasureground and Garden, By N. Jonsson Rose. With 172 illustrations and plans by the author. Large octavo, gilt top, \$3.50. This book is intended to be a help to all lovers of gardening as applied to home surroundings and as an aid to every owner of a country residence, to village improvement societies, landscape gardeners, and young students of the art. It treats of the practical side of landscape gardening, describes the best hardy plants, and points out the proper use of each.

Ornamental Gardening for Americans. By Elias A. Long. A treatise on beautifying Homes, Rural Districts, Towns and Cemeteries. A most valuable contribution to Gardening Literature. Treats on the materials required, the arrangement, construction and maintenance of gardens for homes, parks, cemeteries, etc., profusely illustrated. Cloth, price \$2.

The Spraying of Plants. A succinct account of the history, principles and practice of the application of liquids and powders to plants, for the purpose of destroying insects and fungi. By E. G. Lodeman. Cloth \$1.

The Garden. As considered* in Literature by certain Polite writers. With a critical essay by Walter Howe, and a portrait of William Kent, "The Father of Modern Gardening," 313 pages. It contains essays by noted writers ancient and modern, on the attractions and pleasures of the garden and gardening. It is delightful reading and is a worthy contribution to the library of garden lore. Price \$1.00.

The New Horticulture. By H. M. Stringfellow. This work is really the experiences of the author, an active and successful market gardener and horticulturist, carried over a number of years. Systematic investigation and care marked his efforts and we have, interestingly told, a large amount of practical experience, fighting insect pests and disease and growing large crops. In horticultural work he propounds some radical ideas and methods which gives the book a spiciness which compels consideration. 216 pages, Price \$1.25.

Plant Breeding. by L. H. Bailey. Uniform with, "The Horticulturist's Rule Book." This work comprises a series of five lectures. The first gives the causes of new forms of plants and methods of fixing them and making them permanent. The second explains the use and need of crossing in the vegetable kingdom. The third gives specific rules for the guidance of the cultivation, and is the heart of the book. The fourth is translations of important foreign opinions, and in the fifth directions for the crossing of plants are given in detail and fully illustrated. 12 mo. 293 pages. Cloth. Price, \$1.00.

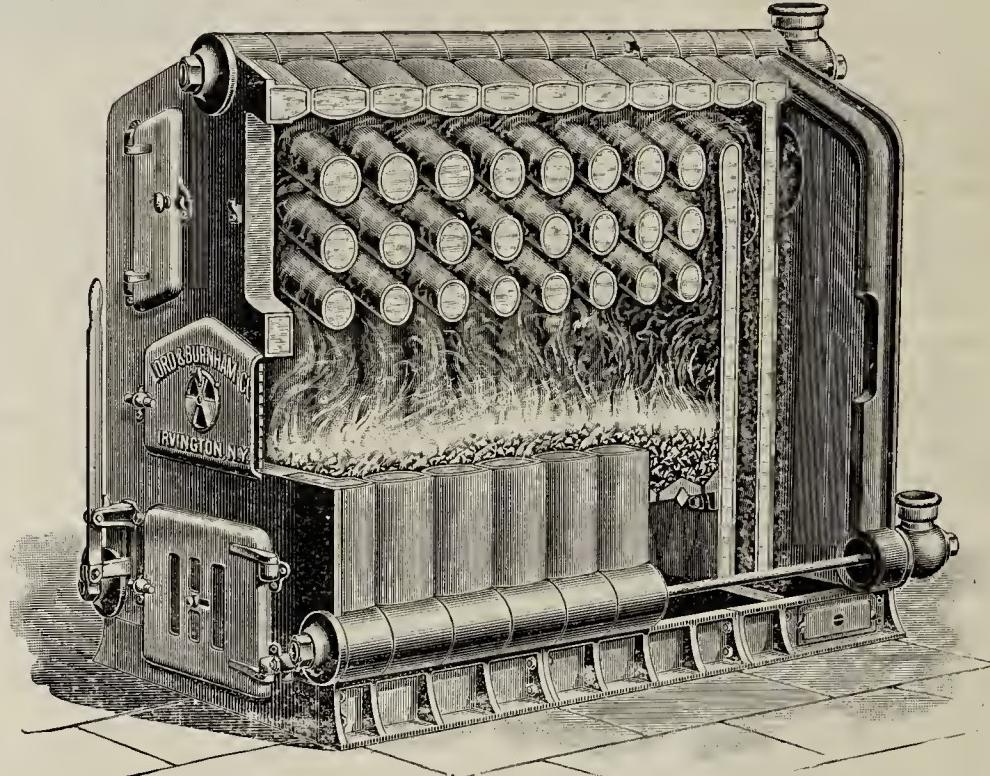
Grasses and Clovers. An illustrated book telling something of the grass farming that is rapidly coming into our American system. It has notes on lawns and lawn making; on permanent pastures and crop rotations; on laying land down to grass with or without the use of a grain crop; on Crimson clover and its wonderful achievements; on green manuring, soiling, etc. It quotes the views and practices of American and European experts, and has something to say about the economic value of the peas, vetches and tares. It mentions the root crops and offers many good hints. Price 25 cents.

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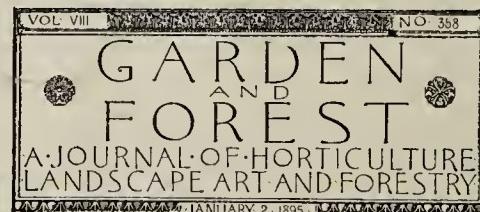
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CONTENTS.

EDITORIAL—HELPS TO LANDSCAPE IMPROVEMENT—ENCOUR-	
AGE ARTISTIC MONUMENTS—SUNDAY FUNERALS	203
*RESIDENCE STREETS—III.....	204
RELATION OF BIRDS TO HORTICULTURE.....	206
*THE NORTH BURIAL GROUND, PROVIDENCE, R. I.....	207
*G. A. R. MEMORIAL CHAPEL, EAST LIVERPOOL, O.....	208
*OAKDALE CEMETERY, WILMINGTON, DEL.....	210
JAPAN LILY DISEASE.—FORESTRY ON THE VANDER-	
BILT ESTATE, BILTMORE, N. C.....	211
*GARDEN PLANTS: THEIR GEOGRAPHY, XXIV	212
FLOWER SHOW OF THE NEW YORK GARDENERS'	
SOCIETY.....	214
*A GROUP OF ARA利亚 SPINOSA IN FAIRMOUNT PARK,	
PHILADELPHIA.....	215
*PROPOSED PARK AT AUSTIN, MINN.....	216
THE ANNUAL FLOWER SHOW, CHICAGO.....	218
PARK NOTES.....	219
CEMETERY NOTES.....	220
CORRESPONDENCE.....	221
PUBLISHER'S DEPARTMENT.....	222

*Illustrated.

THE field for landscape improvement is such a broad one that any information, or system of information, calculated to facilitate the study of the subject for local adornment or instruction should be welcomed. The love of nature seems to be firmly implanted in the human intelligence, and turn in what direction we will, we find crude efforts at cultivation for pleasure's sake, apart from necessity. To raise the standard of such effort to the larger sphere of artistically adorning the homestead or park, or to invoke sufficient interest as to lead to the necessary expenditure for such work, in view of the benefits it imparts and bestows, requires the stimulus of intelligent appreciation of the materials at command, which can only be secured by practical information interestingly presented. For some time past there have been published in these columns an important series of chapters under the head of "Garden Plants—Their Geography," which, while being presented in a style easily comprehensible to any reader, will bear thorough scientific

investigation, both as to arrangement of classes and accuracy of information. But the real value of these articles does not lie alone in the scientifically accurate information they contain, but in the opportunities they offer for the selection of appropriate plants for decorative effects or for landscape work, or for collections of plants for educational purposes. A little study of the series will open up avenues of useful practical application not yielded by a simple cursory examination. And, moreover, selections of plants may be made suitable to any section of the country. With the aid of these chapters it is possible to decorate a lawn with plants from every alliance so far published, and this in a manner which will serve as a natural reference book for students in the classes planted out. These few suggestions may be made to bear abundant fruit in connection with the work in course of publication.

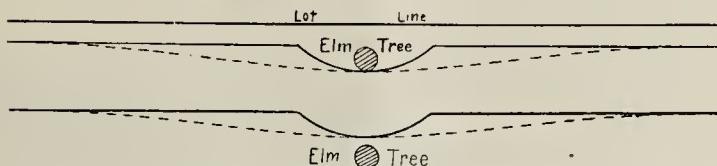
IT is regrettable to notice that the committee on the Jersey City Soldiers' and Sailors' Monument, whose prospectus issued some time since, contained provisions that would undoubtedly secure a meritorious monument, has been assailed by sundry organizations of that city on purely selfish grounds, and grounds that have no place in the question of public memorials. Much has been written in these columns on the important subject of artistic monuments in our cities, and much more remains to be said, if the old soldiers' societies and trade organizations are to dictate in matters involving such important principles, principles requiring the highest intelligence, as well as a broad education, to interpret. It is painful to refer again to the mass of poor monuments, masquerading as art, and occupying prominent sites in our cities, of which a very large percentage would never have been permitted to occupy valuable space if *wise* and *intelligent* care had been exercised in the selection of designs. Common respect for those memorialized, and the great principles often intended to be expressed, but too frequently missed, should at least teach that self-interest must be abandoned for the sake of the cause, and that a real work of art speaks for itself and what it represents, while poor monuments bespeak more particularly the ignorance and, perhaps, cupidity of those who were mainly responsible for them.

THE question of the Sunday funeral is again forging to the front, this time owing to the flagrant breaches of decorum which have recently been recorded in public print, caused by the thoughtless crowds of Sunday visitors at the cemeteries ruthlessly invading the precincts of the open grave and the sanctity of the mourners about it. It is admitted that it would be contrary to the tendency of wise principles to attempt to remedy such conditions on the lines of ordinary government of the community, for it would degrade the occasion and reflect in a detrimental manner on the better side of human nature. And it would be equally subversive of the best possibilities of the cemetery to close its gates on Sunday. On the contrary, the utmost freedom of access should be afforded the public consistent with the preservation of the cemetery in its highest perfection. And after all the intention of the thoughtless crowds is unquestionably not dictated by evil curiosity, but by an illy regulated desire to witness the last sad rites attending human existence, regardless of the special consideration due to the bereaved immediately concerned. Several methods have been tried to isolate for the time being the burial party, but with unsatisfactory results. Another feature of the gathering of such unseemly crowds about the Sunday burial, and of material importance quite equal, in a sense, to the moral question involved, is the destruction about contiguous graves and family lots. This is a matter in the interest of all cemeteries, which must receive most careful attention. It not only causes expense, but more important still, it undermines the devotion of the lot-owners to the higher development of the cemetery. This must not be checked at any cost. It is upon this that the future of the cemetery depends for its continual progress, and everything to encourage and promote such sentiment must be ministered unto. Looking at the question from all sides the remedy which appears to present the most satisfactory and comprehensive solution of the difficulty, is the abandonment of the Sunday burial except in cases of contagious disease. The cemetery management can readily arrange for receiving remains when necessary, and holding services in the chapel or receiving vault, awaiting a week day for interment; and examining all sides of the question, it looks as though the solution of the difficulty mainly lies with the cemetery officials. Several of the larger cemeteries now prohibit Sunday burials; let others follow suit, and we shall soon be relieved from the recurring scandals about the graves on the Sabbath day. To help the good work to a speedier fulfillment, cemetery officials should invoke the aid of the ministry, as well as funeral directors, and united it should be an easy matter to hasten reform.

RESIDENCE STREETS, III. LINES.

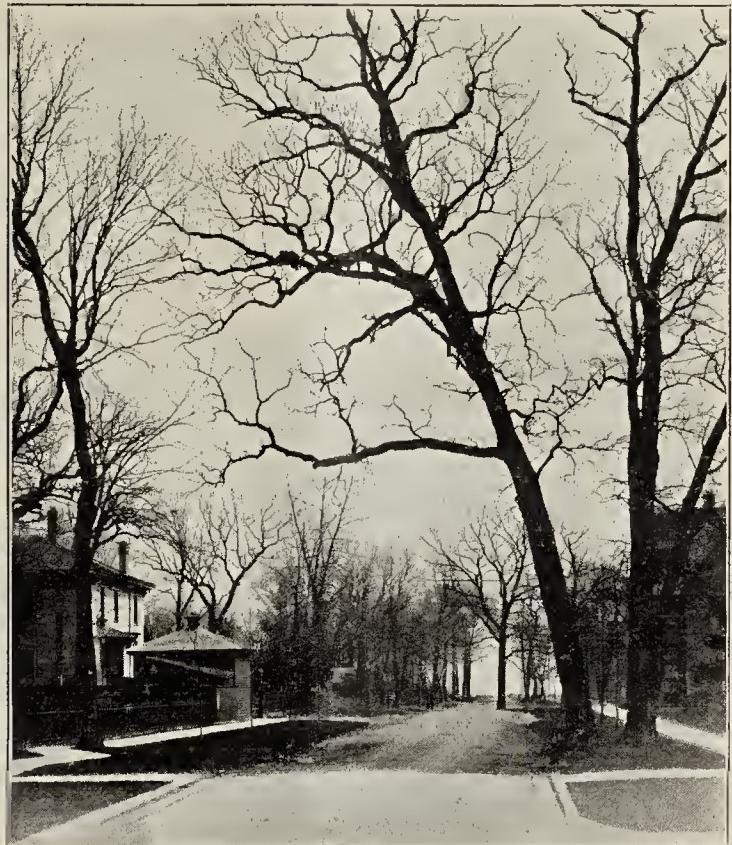
The boundaries of roadways and sidewalks are lines which must be determined before the work of construction can be commenced. The roadway is of the first importance, since it should always be made in accordance with certain rules. It should be formed of approved materials, and given the right grades. Where there are no street car lines, the width of the roadway should generally be a multiple of eight feet. Experience has shown that thirty-two feet is ample width for a thickly settled residence district. The sides of the road-bed are usually made parallel to the sidewalks and the lot-lines or boundaries of the street, but this is not absolutely necessary. There are many cases where a slight deviation from a parallel line should be adopted to save a group of trees, or ease an angle between two streets. Such a deviation having for its object the saving of one or more trees, should be made by a long gentle curve rather than a short turn. We might imagine that the tree to be saved had some feeling of modesty, and so begin to turn long before reaching it, and thus relieve it of any embarrassment it might feel from occupying too prominent a position or appearing to be in the way. An additional protection for the street, would be a group of shrubs placed on each side of the trunk. No criticism can be made on the usual arrangement of having a sidewalk six feet wide on each side of the street. Occasionally, in sparsely settled districts where the soil is porous but at the same time containing some binding material, the ordinary travel of pedestrians will make a path that will be quite smooth and satisfactory. In similar localities a walk narrower than six feet would often answer every purpose and, of course, save expense. Again, where houses are far apart, the property holder owning several hundred feet, or a whole block, a sidewalk on one side of the street may be sufficient. Roadways and sidewalks do not add to the beauty of a street, but are matters of comfort and convenience. Their areas should, therefore, be restricted to those actually needed for use. Sidewalks are usually made parallel to the front lines of the abutting lots, but there is not the least harm in curving the walk to save a tree, provided the curve used is the line one would naturally take to avoid it if there were no walk. The curve should be long and graceful so that the distance traveled will not be appreciably increased. While it is true that city ordinances generally require sidewalks to be placed at definite distances from lot lines, and at a uniform grade with the roadway, it is also true that the strict observance of such ordinances has caused the need-

less destruction of thousands of valuable trees, besides causing property owners unnecessary expense. Sidewalks are occasionally placed next to the roadway, leaving no planting space outside of the walk. While this arrangement gives a greater apparent depth to the adjacent lots it is open to some objections, since pedestrians are more liable to become



splattered with dust or mud than when protected by an intervening space. The effect of a walk separated from the roadway by trees and shrubs, which give it a certain amount of seclusion, is also far better than that of a walk which exposes those using it to the continued gaze of all passers-by.

There is no more objection to varying the vertical distance of the walk above the street grade than there is to varying its distance from the lot line, provided the grade followed is easy and graceful. To be sure, where there is an entrance drive to a residence, the sidewalk cannot be much above the street, but such entrances are sometimes hundreds of feet apart, giving chance for much variation between. An abrupt variation between the level of the sidewalk and that of the street might be dangerous, but with the planting space of the usual width, the sidewalk might be as much as three feet higher than the roadway without doing any harm. The added interest which may thus be given to a resi-



dence street may often give it a most pleasing effect. There are cases in which a highway runs along sloping ground, so that the lots on one side are much lower than the established grade, where the sidewalk might even be lower than the roadway with advantage to all concerned.

The lines of the curbing are often the most conspicuous ones seen in a residence street, but their treatment will be discussed in another place, as will also the outlines of trees and shrubs.



Perhaps the most unfortunate lines connected with residence streets, so far as the appearance of the street as a whole is concerned, are those put by telegraph, telephone, and electric companies. These lines often destroy the artistic effect which such a street should have, and take away all the graceful outlines of the trees, either by obstructing their view with poles and wires, or by the linemen actually cutting off all the branches on one side of the trunks. Telephone men seem to have no appreciation of the beauty of a tree, and often commit the most outrageous depredations without the slightest compunction. They often seem to consider that their poles actually add to the beauty of a

street and so should be made as conspicuous as possible. A lady, in front of whose house a large telephone pole had just been erected, was complaining to a gentleman with whom she happened to be talking of the outrage that had just been committed by the telephone people in putting such an ugly object in front of her window. The man to whom she was talking, much to her surprise, was a stockholder in the company, and hastened to assure her that the pole would be painted, and be quite unobjectionable. The next day the painters came along, coloring the lower six feet of the pole black, and the rest of it white. It is necessary, of course, to have all sorts of wires, but let us hope that they will soon be placed underground. Perhaps each one can do something to bring about such a result by his influence on public sentiment:

Building lines in residence districts are generally placed at some distance from the street itself, but as their location affects the general appearance of the thoroughfare as much as do the other lines referred to, they will be briefly mentioned here. Such lines furnish a protection to all who build homes. Every residence should have a certain seclusion, a quietness, that will give rest and comfort to its inmates. The farther the building line is removed from the street, the greater will this seclusion be.

Still other lines which might be considered are those of fences and hedges. A fence helps to give the seclusion, the quietness, the freedom from intrusion, so desirable for one's home, but at the same time it is apt to have the ugliness so objectionable in the case of the telephone poles, and it often seems exclusive in an offensive way. A hedge is, perhaps, an improvement on the fence, but, as it is composed of trees or shrubs, its consideration may very properly be deferred until we come to street planting.

O. C. Simonds.

RELATION OF BIRDS TO HORTICULTURE.

Prof. Otto Lugger of the Minnesota State Experiment Station has been for some time making investigations on the subject of the relation of birds to horticulture in the way of what percentage of the food of insectivorous birds consists of injurious insects. It is claimed that such insect eating birds are generally beneficial to the gardener and farmer. His investigations, however, go to show that the insectivorous birds do not discriminate between noxious and harmless insects, simply interesting themselves in obtaining food in the easiest manner.

In the course of an interesting article in *The Minnesota Horticulturist* Prof. Lugger says: "I do not wish to say that insectivorous birds are not beneficial, because at the present time we know too little about it. Many dissections have to be made, and have to be made at all times of the summer, to give us a true insight into the food

habits of the birds. We know already that a bird may be beneficial in the spring and destructive in the fall. We also know that a bird may be of great benefit to horticulturists in one locality and be the opposite in another one. Until we know more about such things it is wise to give all birds the benefit of the doubt, especially as birds are the aesthetic features of our fields and forests, and will deserve our protection on account of their songs and pleasing forms and habits."

During the past two summers the professor devoted considerable attention to the house wren, a useful bird, to attract which to his house he provided a number of bird houses, and fastened them to neighboring oak trees. These pottery bird houses had an opening only large enough for the wren itself to prevent the entrance of larger birds. Eleven of these houses were occupied by as many pairs of wrens, and each pair produced at least two broods of five birds each, so that the eleven pairs of birds had to provide food for themselves and 110 young ones. It was noted that the young birds refused every kind of food but insects. The results of the observations on these birds are given in the article above, referred to as follows: "The food consumed by the first brood consisted mainly of small beetles, young grasshoppers, crickets and the caterpillar half an inch and more in length, so common among grass. The second brood was fed almost entirely with small caterpillars and the larvae of sawflies. The old birds are most active in providing food for their young from five to nine in the morning and from four to seven in the afternoon, at which time each one makes at least one trip every five minutes. A calculation based upon these facts shows that at least 1,875 insects are required for the five young birds of each generation, or the amazing number of 41,250 insects had to be brought to the nests of the young birds raised in these bird houses. This does not include, however, the food consumed by the twenty-two adults nor that consumed by the young after they had left the nest, but were still found in the vicinity.

Now, the question arises, What was the relation of this large number of insects to the cultivated plants grown in the vicinity of the house? As I did not want to kill my pets I could only study the insects brought to the nest by means of a powerful field glass and also watch the birds while searching for insects in the garden. The numerous small and black insects consumed by the first brood of wrens were mainly ground-beetles and small bugs. None of them can be said to be injurious, though some of the ground-beetles are suspected of eating the pollen and immature seed of grasses. Of course the grasshoppers, crickets and green caterpillars are all injurious insects; hence, the first brood of wrens was certainly much more beneficial than injurious. The second brood, consuming nothing but caterpillars and the larvae of sawflies, was decidedly beneficial. My six rows of currants and gooseberries were badly infested with the destructive sawflies, and it became necessary early in the season to spray with hellebore. Later, however, I noticed that the wrens were very active among the bushes, and, carefully watching their actions, I soon discovered that they were searching for the larvae of the sawflies that had hatched since the application of the hellebore. Their good work was shown by the fact that all the larvae were carried off as soon as they hatched from the egg and became large enough to be seen."

THE NORTH BURIAL GROUND, PROVIDENCE, R. I.

The accompanying views about the entrance of the North Burial Ground, Providence, R. I., established in 1770, point a moral which may well be given very liberal consideration by cemetery officials generally, for the proper development and care of our cemetery entrances has not received,

in the purchase of lots, than has been hitherto recognized. The views given herewith speak for themselves. From both the outside and within the gates the landscape work is effective and refreshing and positively invites better acquaintance. North Burial Ground is under the care of the city government, which is keenly alive to the propriety of continuing



ENTRANCE AND OFFICE, NORTH BURIAL GROUND, PROVIDENCE, R. I.

except in very few instances, the attention of which the best interests of such properties really demand. The desire to make every foot pay, has clouded the business intelligence to the fact that a well designed

effective work of improvement throughout the cemetery, the idea being to bring the tract up to the standard of the best modern ideas of cemetery work, the land being well adapted to refined landscape ef-



VIEW INSIDE ENTRANCE OF NORTH BURIAL GROUND, PROVIDENCE, R. I.

and carefully planted introduction to a cemetery's grounds, coupled with appropriate office buildings, the whole forming an attractive piece of landscape work, a real example of art out-of-doors, are more potent in inducing prospective lot-owners to invest

fects. A proposed addition to its equipment is a chapel and Receiving Tomb, to cost some \$30,000 for which plans have been drawn. Mr. James Warren, Jr., is the superintendent, to whom we are indebted for the beautiful views.

G. A. R. MEMORIAL CHAPEL, EAST LIVERPOOL, O.

In thinking of the Grand Army of the Republic, and of its rapidly diminishing forces, the mind reverts to the great number of various descriptions of monumental memorials already erected in honor of their comrades who died for their country, and of the greater number that may possibly be erected in the future. And since these monuments are generally located in prominent public places, the question occurs whether the ordinary soldiers' monument provides the proper memorial or whether some more utilitarian idea would not serve the purpose better. Unfortunately the lack of means to produce a really meritorious work has militated seriously against the better character of the majority

of the monuments already existing, as far as public taste is concerned, and the consequent monotony of design is apparently already palling upon the more intelligent of our citizenship, and in some cases upon the old soldiers themselves. In view of this it is not surprising to find that attention is being directed towards other means of embodying gratitude and respect in solid form, and designs for memorial halls and memorial chapels are becoming more frequent, and variation in style and permanent conditions offer a wide range or selection.

The illustrations given herewith represent the Grand Army of the Republic Memorial Chapel, now in course of erection at East Liverpool, O., from designs of Messrs. Owsley & Boucherle, architects, Youngstown, O., to whom we are indebted for particulars and means of illustration.

The edifice is built of Cleveland stone up to the roof of the lantern or cupola, the roof being supported on steel trusses. A marble wainscot, five feet high, is carried around the interior, above which to the ceiling cut stone forms the lining. The floor is laid with ceramic mosaic, and the ceiling is constructed of stamped sheet steel.

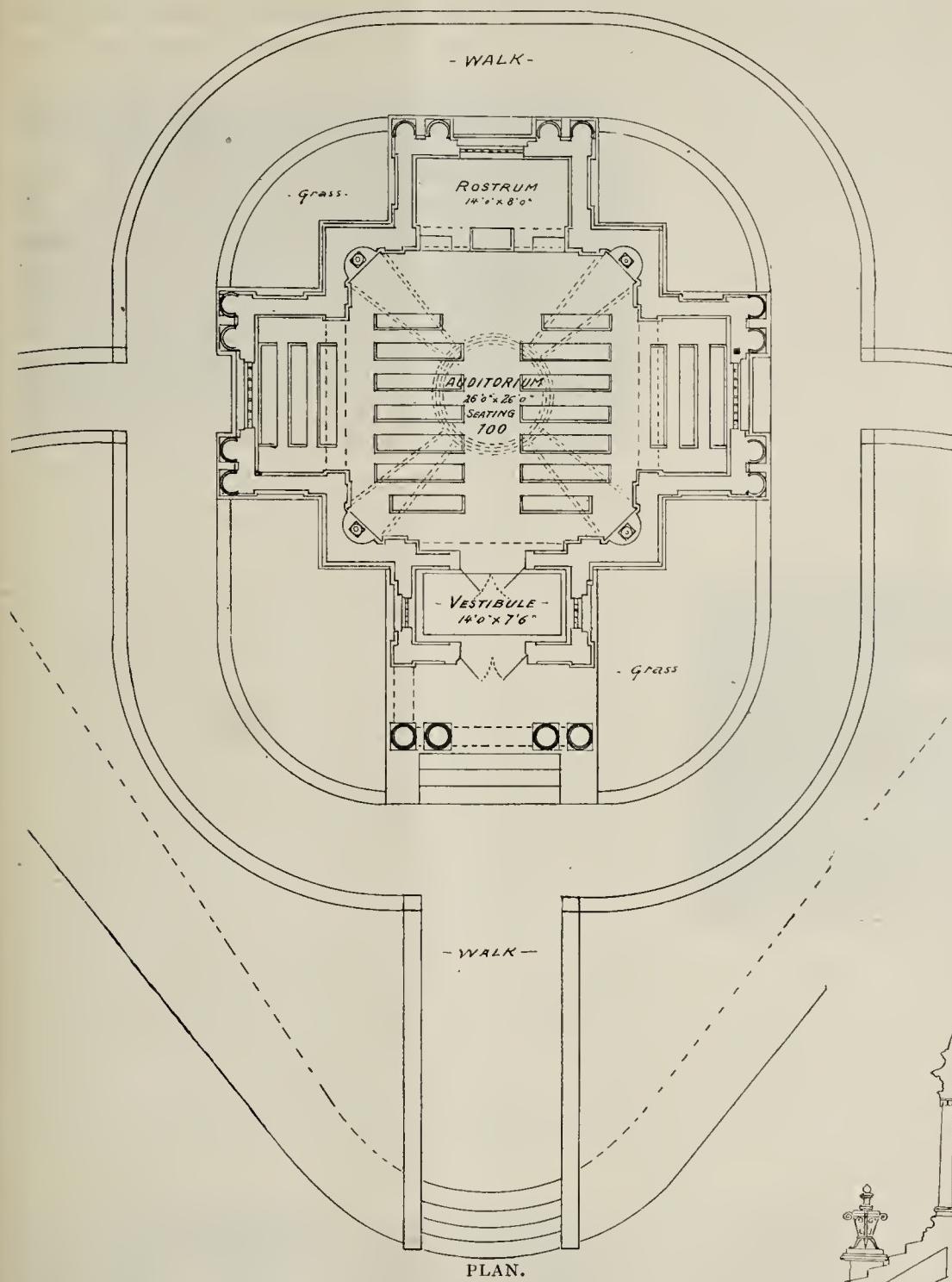
Steam is used for heating purposes, and is carried to the building from a private house some distance from the structure, outside the grounds.

The cost complete will reach about \$15,000.

The principal dimensions are as follows: Auditorium, 30 feet square, with seating capacity of 200; three memorial rooms and rostrum, 16 feet by 8 feet; vestibule, 8 feet by 16 feet. The complete height, in-



PERSPECTIVE VIEW.



cluding the statue on the dome is eighty feet.

Messrs. Floto Bros. of Steubenville, O., are the contractors for the work.

There would appear to be a growing tendency among the G. A. R. organizations to examine into the merits of memorial halls when considering the question of erecting monuments to their departed comrades, and in many respects with good reason.

When we look at the utility of the hall in comparison with the monument, the former possesses many advantages over the latter. It may be made more pretentious and imposing, and provided it be constructed of granite or such like durable material, it will be of similar permanence. Further than this, it may be made to serve a rich purpose in the

way of memorials. It not only affords, in a measure, great opportunities for sculptural adornment, in portrait or other statuary, to immortalize such individuals or incidents as its promoters may desire, but in its auditorium, and whatever other chambers may be provided, it presents means and opportunities for preserving records and relics, concentrating business affairs, public and private gatherings of those interested, and the appropriately observing of memorial services and ceremonies.

It is possible to make of a memorial hall a soldiers' monument in a very broad sense.



TRANSVERSE SECTION.

OAKDALE CEMETERY, WILMINGTON, N. C.

Oakdale cemetery, Wilmington, N. C., prettily located in the thriving southern city, was first established in 1853 and the first interment was made February 11, 1855. It comprises 80 acres of land, the soil of which is principally sand with some clay, and it is surrounded on three sides by water, while its highest point is some thirty feet above tide level.

The views give an idea of the nature of the roads and the general aspect of the cemetery and its style of lay out. As may be observed, and which of course is common to the older cemeteries in which ideas prevailed not now considered good practice, there is considerable stone curbing, fences and such old style cemetery adornment. This, where conservatism is deep rooted as is the case in all old-time communities, it takes patience to change



into modern conditions; but there is an air of progress visible in the beautiful grounds, and as is exhibited in a few other southern cemeteries, rapid strides are being made to modify such defects in the beautiful landscape pictures, as mar the harmonies, and progress will be pronounced as the lot owners become educated to the idea that it is not the one lot of their own, upon which they should lavish their entire thought, but upon their one lot as a component factor of a beautiful whole. This is the key note of beautiful cemetery landscape work, and the sooner it is well understood the more attractive will the older cemeteries become.

There are in Oakdale six miles of macadamized roads and thirteen miles of walks and avenues. Twelve sections of four acres each have been laid out, and the standard size of lots is 400 feet, but there are many ranging from 800 to 1,600 feet and the largest lot in the cemetery is 4,000 feet.

Pumps are employed for water service and the supply is taken from the adjacent river.

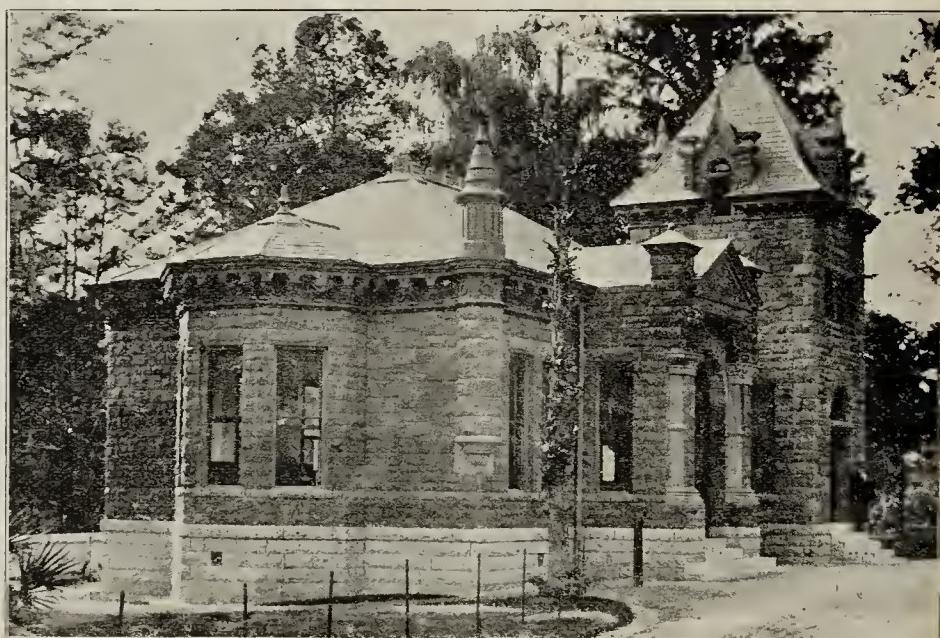
Neither a receiving tomb nor greenhouses have yet been constructed. The climate is so mild that



interments can be made at any season of the year and on any day, and the same conditions in a measure regulate the planting of the cemetery.

During the thirty-five years of the superintendency of Mr. Timothy Donlan, to whom we are indebted for photographs and particulars of Oakdale, 7,500 whites have been interred,—negroes have a cemetery of their own. Of the above number 1,037 were U. S. soldiers, whose remains were removed to the National Cemetery when it was established in 1868. During 1896 there were 94 burials.

The lodge illustrated herewith was erected this year to take the place of the building destroyed by fire, of which notice was made in these columns. It is constructed of brick veneered with brownstone, rubble face. The trimmings generally, as well as pediment over front entrance, is of buff stone. It is roofed with slate with copper finials and ridge crest. The tower, which is 14 feet by 14 feet and 30 feet high, contains in its first story the superintendents office. The front vestibule is 12 feet by 6 feet with tiled floor and the reception room is 34



OFFICE BUILDING.

feet by 24 feet. It is so arranged that in connection with a large bay window, at south end, it may be used for funeral purposes. The building was designed by Mr. James F. Post, architect.

The cemetery is owned by the lot owners and governed by a board of seven directors elected by them. Every owner of a 400 foot lot is entitled to a vote in all matters pertaining to the welfare of the property. The directors serve without pay and all revenue is expended on the cemetery.

In respect to his regulations in the cemetery Mr. Donlan says: To some they appear harsh, as most rules will sometimes, but a superintendent may educate his lot owners if they have cause to place confidence in him, and only by carrying out the rules will he be supported and respected by them.

JAPAN LILY DISEASE.

A most interesting set of experiments has been undertaken at the Kew laboratories with reference to the very serious disease of the finer Japan lilies. The remedies recommended are given below, and are interesting chiefly because well known and but little used. I think Lindley pointed out more than fifty years ago that a solution of corrosive sublimate "1 to 1,000 or 1 to 1,500," or even weaker, was certain destruction to most forms of microscopic cryptograms. But it requires the greatest caution in the using. It is quite as corrosive as it is called, and cannot be placed in the hands of careless people. It is instructive to observe that after all the "experiments" such well tried remedies as petroleum and lime wash hold their own.

F. MacP.

"The lily bulb disease is caused by a parasitic fungus called *Rhizopus necans*. The fungus cannot penetrate the unbroken tissues of the bulb, but gains an entrance through wounds, more especially broken roots. The amount of evidence forthcoming indicates that the bulbs are not diseased until after they are removed from the ground. The spores of *Rhizopus necans* are killed by a short immersion in a 1 per cent solution of corrosive sublimate or of salicylic acid. Neither of these substances has any injurious effect on living bulbs, provided they do not remain in the liquid for more than fifteen minutes."—*G. Massee in Kew Bulletin.*

FORESTRY ON THE VANDERBILT ESTATE, BILTMORE, N. C.

The importance of Forestry, as it is called, in the care of timber lands, is a subject that has been lamentably neglected by the ruling powers of this great country, notwithstanding that every other civilized nation long ago realized the necessity of cultivating the knowledge for its own economic development. But the legislatures of the timber states are rapidly awakening to the matter, and it is gratifying to note that on the magnificent estate of Mr. Vanderbilt, at Biltmore, N. C., a Department of Forestry has been established, to manage its forests upon a practical basis, and in manner that will afford the best

of all experience for other sections of the country, for ample means are at command to ensure immediate success, and present the data gathered in practical form.

The following extract from "North Carolina and its Resources," a volume recently issued by the Board of Agriculture of that state, affords some interesting information: "On the Biltmore estate, the endeavor has been to carry out only those principles of forestry which apply as well to the government forests, or those owned by a lumbering firm. Forestry that does not pay is no forestry at all; hence, many methods which are considered of first importance in the forests of France and Germany are denied to us, for the simple reason that forestry in this country is still in its infancy.

"The Forest Department of the estate has under its charge about 110,000 acres of wood lands, a much larger tract than is usually assigned to any one forester. These wood lands are divided into two distinct parts; the first containing 10,000 acres, lies almost entirely in the mountains, and is known as Pisgah Forest, so called from Mt Pisgah which has an elevation of over 5,000 feet. These two forests cannot be treated upon the same system. In Biltmore Forest the main object has been to increase the value of the growing stock, to protect the more valuable from the faster growing species, and gradually to secure an even aged wood, which is important, as it facilitates the management of the forests in a great degree. Before Mr. Vanderbilt bought Biltmore Forest, most of the large timber trees had been cut down, so it was decided, as there was a good sale in fire wood in both Biltmore and Asheville, to grow only trees for fire wood. The forest was composed almost entirely of oak and pine. The pine is a much faster growing tree than the oak, and the oak is the more valuable of the two, hence something had to be done to help along the oaks. This was accomplished by either giving the oaks a start in their youth, by sowing them in distinct groups, or by cutting back the pines when threatening to over-top and kill the oaks. A sufficiently dense covering must be kept at all times, in order that the soil may not deteriorate.

"Pisgah Forest has never been lumbered out. Here the timber has reached a large size, and the Forest Department is growing only timber trees, as it would not pay to bring fire wood from so great a distance.

"The amount of timber which shall be cut in Pisgah Forest each year, and the same holds good for the amount of fire wood in Biltmore Forest, is fixed by what is known as the 'sanctioned annual yield.' This is the amount of wood that is added to the tree each year, and from this we are able to find the amount of wood added to the whole forest each year. If we cut no more than this our forests will surely not be diminished."

An idea of the length of time that has elapsed since Queen Victoria last visited Ireland can be had by a look at the oak tree she planted at Muckross, Killarney. The big tree also gives one a notion of the queen's age, for it is venerable indeed, and the entire royal household could be sheltered beneath its wide-spreading branches.

GARDEN PLANTS—THEIR GEOGRAPHY, XXIV.

FICOIDALES.

THE ECHINOCACTUS, OPUNTIA AND MESEMBRYANTHEMUM ALLIANCE.

There are five tribes, thirty-nine genera and 1,545 species accredited to this alliance.

The Echinocacteæ and Opunteæ are American, the Mesembryanthemeæ, etc., mostly old world species.

Ficoidales was originally applied to the "Hottentot figs" alone; now it includes the "Indian figs."

On both sides of the tropics there exists a desert belt of varying width, which in the northern hemisphere embraces the Rocky Mountains and Southwestern United States, with considerable portions of Mexico and Central America, and in the old world a good deal of Northern Africa, Arabia, Persia, Northwestern India and Central Asia.

The southern belt has much less land in the old world, but embraces wide areas in Central Australia and South Africa, and on the American continent parts of the Argentine Republic, Bolivia and coast regions of Peru and Chili.

These arid belts are the homes of a large number of curious succulent and fleshy plants adapted by nature to their environments. They are often thoroughly armed and protected by spines. The warm portions of these regions give birth to nearly all the plants of this alliance.

In some ways they recall Orchids; their range of temperature, their dislike of stagnant moisture, their provision against drought, their capacity for good supplies of moisture during their shorter period of growth, their sometimes tuberous, sometimes aerial roots, their wonderful polymorphism, their climbing, epiphytic, viviparous, cespitose, almost pseudo-bulbous habits and often gorgeous flowers all tend to proclaim them as remarkable among exogens as orchids are among endogens.

No plants are more desperately muddled in the minds of people and professors alike than these. Learned doctors are never more happy than when preparing confessedly hypothetical and imperfect books and pamphlets by the ton, and urging their printing at the people's expense, merely with a resultant of greater topsy-turvydom.

In the great gardens, too, glass houses are filled to-day with the "Succulenteæ" of Linnæus—many petaled Cereus, composite Senecios, A-petal Euphorbias, and endogenous Agaves, Aloes and Yuccas differing utterly from all three, yet presented for the "instruction" of lay mankind! They rarely or never flower. It is small wonder that "Cactuses" are but very imperfectly known.

Many species, however, are capable of rich effects quite independent of their flowers. This has been well shown by Mr. Menke at Horticultural Hall, Philadelphia, and by the Cacti Society of Baltimore, both in geometrical gardening. In California several essayists have planted them in a more natural style. The tribes afford a rich assortment of form and color, and their effect may be made both rich, startling, grotesque and unique. The hardy opuntias and echinocacti may often be used northwards as a permanent covering for the ground, especially where it is well drained and protected during winter by snow.

Beds of sandy soil may be raised on foundations of brickbats or stone. I have seen *Opuntia vulgaris* come through the winter in Canada splendidly, planted on such mounds, indeed the form called Rafinesqui is found naturally as far north as Michigan and Minnesota. During the summer months a fine selection of tender forms may be plunged in their pots or planted out on such mounds, taking every precaution with the drainage of both pots and planting stations.

A few good collections are kept by tradesmen in California and the East, and choice forms should be selected at these places, for they vary tremendously, their condition varies, and their nomenclature is the despair of the learned. Some excuse is made for this: herbarium specimens are very difficult to prepare, many grow in most inhospitable regions, the knowledge pertaining to them has been slow and troublesome to collect, and it continues to be largely a labor of love by another generation of enthusiasts without much means to distinguish themselves, unless they invent a new name or two.

There are few things so necessary as the submission of these men to some recognized standard. If they will insist (in the plenitude of their wisdom) in raking up all the obsolete polysyllabys back from the Kew Index to Pliny* it is doubtful if their "interesting" researches into the biographical jungles will ever either end, or be of utility, and they will find a large class of readers ignore them. They should determine upon a limit for the twentieth century, and be fined for deviations either of classification or generic nomenclature. Botanists have no right to inflict so much trouble upon their students, who rely upon their professions and buy their books to avoid it. It is impossible to find two works in agreement with any standard.

Melocactus has thirty species, natives of Mexico, the West Indies and Brazil. Probably it includes some of the species called "cactus" by Linnæus,

*See *Pirus* in Watson's Biography, *Castalia* in Britton's plants of New Jersey, *Magnolia foetida* in Sargent, *Cactus* and *Lophophora* in Coulter, etc.

for large numbers were sent to Miller early in the eighteenth century.

Mamillaria has 360 species, about thirty of which (or double as many according to some) and a number of varieties are natives of the Southwestern United States, with one species extending to Western Canada. The remainder are from Mexico, the West Indies and South America. Anhalonium is regarded as a section of the genus by Bentham and Hooker. Certain of our compilers desire to entirely upset this genus *again*, and go back to Linnæus, who knew next to nothing about the plants anyhow. It is pumpkins to potatoes that the first plant of the alliance known to him was *Opuntia vulgaris*, for it had become a roadside weed in Southern Europe in the first century after the discovery of America, it was introduced to English gardens from Italy in 1596, and has been called "Italica" by some, I believe. *M. missouriensis*, and especially *M. vivipara*, extend far northwards, the latter species to British Columbia. They have been grown outdoors in many gardens, and where the snow affords protection are reported hardy. They will not well endure the changeable winters of the middle Atlantic States, however.

It may be useful to give an approximate idea of the great difference of climate through which the varieties of these plants range.

The northern expressions experience January minimums varying from 20 degrees below zero Fahrenheit to 30 degrees or more above, and July maximums varying from 50 to 90 degrees Fahrenheit, with cool nights. The snowfall is usually heavy in winter and protects the plants, the scanty rainfall falls mostly from April to September and amounts to eighteen or twenty inches, or less.

The climates of the States bordering on Mexico are different. At one station the January minimums

range from 43 degrees Fahrenheit at night, to 66 degrees by day, and the August maximums from 73 to 98 degrees Fahrenheit, or more, with cooler nights. The rainfall is different, falling principally from December to May in scanty but varying amounts, sometimes reaching to eighteen or twenty inches per annum, with three or four inches falling during the harsh dry summer. Snow in the winter is rare and a mere flurry.

It must not be assumed that all the climates are thus. The seasons and periodicity of the rainfall and temperature vary considerably in the same latitudes.

Often a mountain range will exactly reverse the season of rainfall, and greatly modify temperatures. Speaking generally the rains follow the sun, being heaviest when it has the greatest influence. Thus in many parts of the tropics and subtropics which are the homes of *Mesembryanthemæ*, the rainy season is the hottest. In the Transvaal the summer is hot and rainy, continuing from October to May.

Then the drier, colder winter sets in, lasting from June to September, without a single shower.

The altitude is considerable, the air dry and clear, and the radiation such that it produces frost just sufficient to cover still water with ice, which melts in the first rays of the morning's sun.

From all this it will be seen how important it is to know the climates plants inhabit.

Tender species will sometimes best make their growth under glass at the East, but as to this cultivators will study the peculiarities of individual forms suited to their conditions. Many make flowering growths with some certainty, while others have rarely or never flowered in cultivation. Many of the kinds produce effects scarcely at all attainable with other plants. The varying colors of the plants and their spines lend themselves well to



- 1. MAMILLARIA MISSOURIENSIS.
- 2. MAMILLARIA HEYDERI.
- 3. MAMILLARIA PECTINATA.
- 4. MAMILLARIA FISSURATA.
- 5. MAMILLARIA MICROMERIS.
- 6. MAMILLARIA PURILLA.
- 7. MAMILLARIA LEUCANTHA.
- 8. MAMILLARIA WILLIAMSI.—*Coult.*
(ECHINOCACTUS, ETC., WILLIAMSI.)

quiet but rich geometrical designs, which require little care beyond weeding. They do not increase perceptibly in size during one summer. The group in the engraving is made up by the kind permission of Mr. Blanc from his cuts.

Pelecyphora is monotypic and a native of Mexico. It varies in the colors of its flowers.

Leuchtenbergia principis is also a monotypic Mexican plant.

Trenton, N. J.

James MacPherson.

FLOWER SHOW OF THE NEW YORK GARDENERS' SOCIETY.

The exhibition given in the ballroom of the Hotel Astoria, New York, on the 12th, 13th and 14th of November, was the grandest in its ensemble that has ever been seen in America. Quality and careful arrangement were the prevailing features, and the splendid room, with its rich red-crimson carpet, its flood of soft light and splendid proportions and decorations, formed a setting for the fortunate Gardeners, such as has rarely been accorded a "flower show" anywhere.

At one end of the ballroom is a raised dais the full width, and this was the leading site of the three leading groups of "stove and greenhouse plants," each occupying 100 square feet.

Mrs. E. R. Ladew of Glen Cove, Long Island, carried away the first honors, and Mr. Richard Brett, gardener to J. B. Colgate of Yonkers, N. Y., was placed second, probably from a desire on the part of the judges to distribute the awards somewhat, for every gardener with whom I spoke insisted the second-prize group, and even those which received no prize, were better plants and better arranged. Be this as it may, the Kentia or Howea in the Colgate group was very fine, as, indeed, was every plant exhibited by Mr. Brett, who carried the honors in the other classes. The gardeners make a mistake to let commercial florists do their judging. They are sure to be controlled by some phase of the commercial instinct, and their sphere of experience as plantsmen is too narrow. The ends of the room and the floor were occupied in just the proper proportions with similar but smaller groups of the superb plants of the tropics, and it was difficult to say whether the room enhanced the magnificence of the plants, or the plants fully finished the room. The color scheme was as near perfection as it well could be, and the detail merely lacked a few dozen palms to hide out the "15-cent" silkaline used to cover the stands for the specimen plants on the floor. It was not in consonance with the carpet. Mrs. Ladew had a specimen of the rare Araucaria Rulei introduced some years ago from the Papuan Islands, and it received

a special prize, as did also a very good piece of *Strelitzia Reginæ* from the same lady. Fine examples of *Nepenthes Mastersii*, *Cycas*, *Phoenix reclinata*, *Arecas* and a superb *Howea Belmoreana* were conspicuous, while around the sides of the room and in its ante-rooms and annexes were arranged examples of painstaking cultivation produced by the often able men who garden for the wealthy with less greedy crowding than the commercial man finds necessary. Perhaps the most notable exhibit among the flowers was the Chrysanthemums shown by Mr. Peter Duff, gardener to J. Crosby Brown, Esq., of South Orange, N. J. They were perfect cauliflowers of chrysanthemums, of a size that it was freely asserted had never been equalled in Japan or anywhere. Mr. Duff is a young Perthshire Highlandman, which is perhaps sufficient of explanation. He also took first prizes for specimen plants in such classes as he exhibited. The best three *Codiæums* were shown by Mrs. J. Hood Wright of Fort Washington, N. Y. It was curious to find these plants labeled both *Codiæum* and *Croton*, and it must have puzzled visitors. A magnificent mass of *Cattleya labiata* was put up by Mr. Herrington, gardener to Mackay Twombly of Madison, N. J., said to have nearly 150 flowers in several well-marked varieties. The general collections of Orchids were mostly small plants contributed by Mr. Twombly, C. G. Roebling, Mr. Manda and one other whose name escaped me. The albino variety of *Cypripedium insigni* in the Roebling collection attracted much attention, because it was valued at \$1,500. The many varieties of *Dendrobium Phalænopsis* were, however, intrinsically more beautiful; so also was *Ærides Sanderiana*. There was some dissatisfaction expressed as to the judging in Orchid "groups," mainly because the first prize group in one of the classes contained fewer varieties than the second. The flowers used by florists were shown in the annex and ante-room. Mr. Manda had groups of *Caladiums* in fine variety; also *Pandanus* and Orchids. C. W. Ward of Cottage Gardens, Queens, L. I., had superb carnations. J. M. Hunter had *Gardenias* in good condition. J. Shultheis had a quantity of *Ericas* in three or four species. There were superb *Cyclamens* by C. Trauth of Flatbush, L. I., and others, with roses, mignonnettes and many other things too numerous to mention in anything but a schedule of prize-winners.

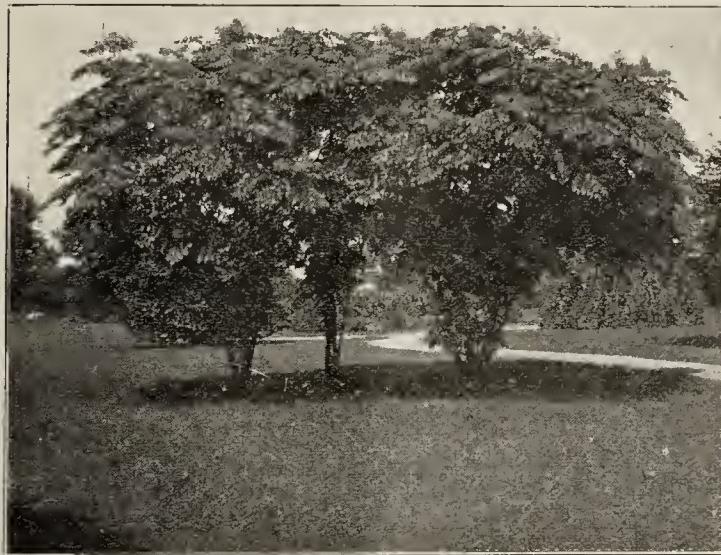
Hothouse grapes were there, too, the Barbarossas from Mr. Wm. Scott, gardener to J. C. Eastman of Tarrytown, N. Y., being the finest. A bunch of Muscat Hamburgs were perfectly red, but they got a prize! Altogether this effort of the gentlemen's gardeners was a particularly brilliant one, and I

hope it will be financially successful. The admission charge on the first day was "too exclusive." As three or four members of the "Four Hundred" remarked to me: "Two dollars is quite a serious sum of money!" It is hoped the cheaper tickets for the second and third days would fill the exhibition to overflowing.

J. MacP.

A GROUP OF ARALIA SPINOSA IN FAIRMOUNT PARK, PHILADELPHIA.

Although the Aralia is frequently found in gardens about Philadelphia, I do not remember ever seeing such a pretty group of them as exists in its Fairmount Park. So beautiful did they appear when full of flowers, one day in early September, that I



GROUP OF ARALIA SPINOSA, FAIRMOUNT PARK,
PHILADELPHIA.

persuaded a good friend of mine to take a photograph for me for use in PARK AND CEMETERY, which it gives me much pleasure to present herewith.

There are several species of Aralias, but this one, our native species, is the best of the many I have seen. There is a Japanese species, *Aralia Japonica*, which is not distinguishable from ours, so far as I have observed. It may be mentioned here, though probably already known to many of your readers, that there is a wonderful resemblance in the flora of the two countries, our own and Japan, suggesting a much closer connection between the two at some time than now exists. The Aralia mentioned, many magnolias, and various shrubs of Japan, resemble closely wild ones of our own, and this similarity is confined to the flora of these two countries.

The beauty of the Aralia and its value for park purposes, consist in its tropical looking leaves, its immense flower heads and its fruit.

The pinnate leaves are often two feet in length, and as they are mostly towards the top of the bush,

it gives an arbor-like appearance which is most desirable. The flowers are greenish white, in numerous umbels, the whole producing an immense panicle. I have seen one panicle of a size to fill a half bushel measure. The illustration shows the panicles, but as the trees are of some age they are not as large as they are on younger ones. This tree grows from Pennsylvania southward in a wild state, making a small tree of about twelve feet or so in height, and often it will make but the one straight shoot, without any branches whatever, so that when in leaf it much resembles in appearance a large palm. I should mention that with the fading of the flowers comes little berries, which soon, stems and all, take on a cherry color, passing from this to black, and this great mass of fruit is as pretty as the flowers.

When desired in clump shape, the top should be cut off near the ground, when several shoots will start up from underground. Sometimes two or three will come from each one as has occurred in the case of this park group.

These trees, suggestive as they are of shade and comfort of a hot day, are not just the place for one to sit under.

The stems are exceedingly prickly, which has doubtless suggested its common names Hercules Club and Devil's Walking Stick.

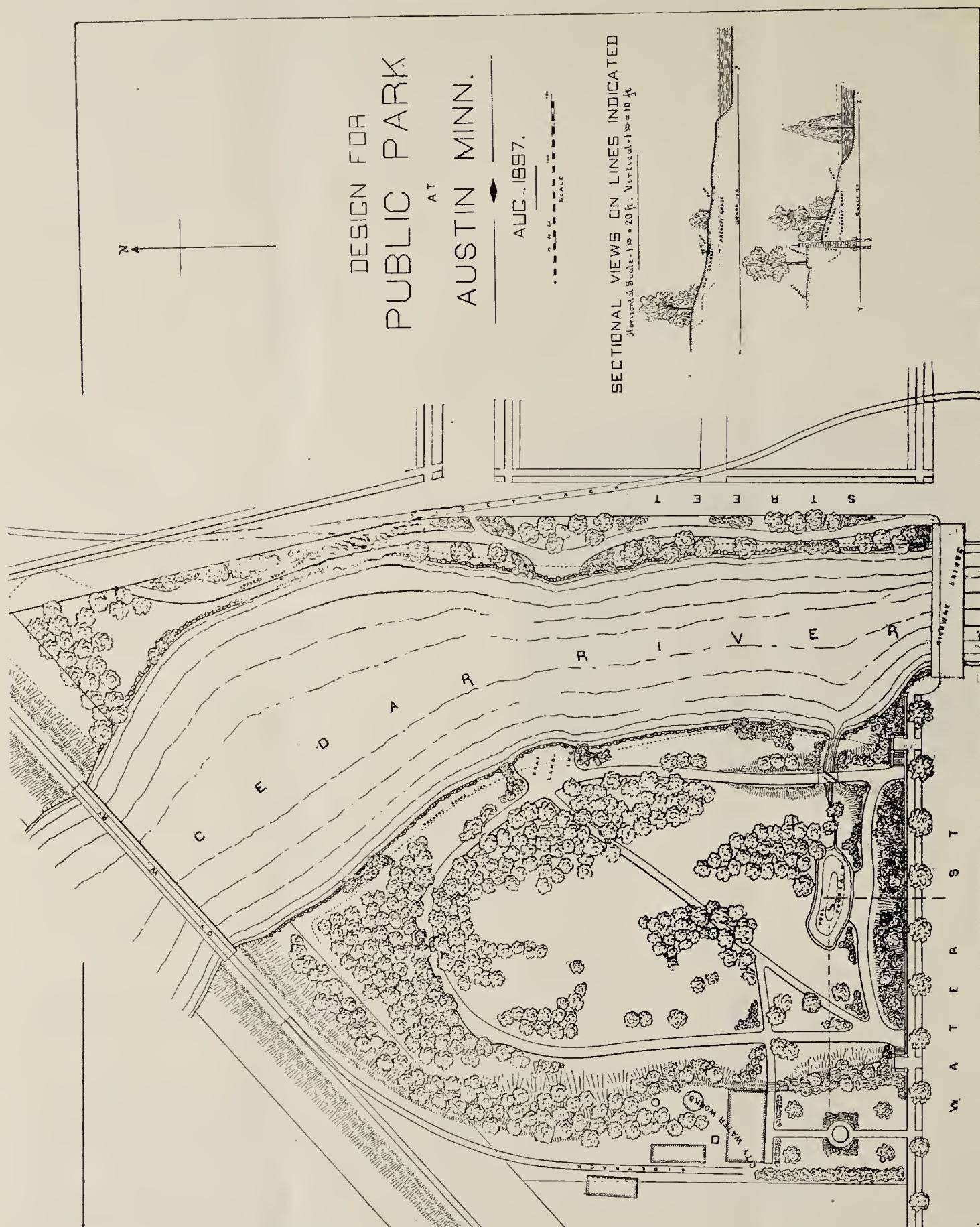
Looking through the group of Aralias will be seen a portion of the flower beds in the distance and to the right of it the lower part of a beautiful specimen of the Weeping Beech, another most useful tree for park purposes. When young it is scantily provided with branches, but as it gets age it fills out splendidly in the way shown in the picture, especially if the leaders are cut out from it from time to time.

Joseph Meehan.

Botanists have found no fewer than 120 different kinds of flowers on Spitzbergen, most of them being unknown on the European continent.

A writer in the Detroit Free Press says: The Japanese have a flower language. They have clearly determined the sentiments that correspond to such and such flowers, and especially those expressed in the grouping of flowers. They do not arrange them as we do. They make use of a vase or a hollow bamboo stalk ornamented with a motto of their own composition, and capable of containing stems of different lengths. Their arrangement is then intrusted to special artists, who endeavor to give emphasis to the different heights, for in Japan this arrangement of flowers is treated as a real art, learned by a course of full and minute instruction, without which no education, masculine or feminine, is considered complete. The shortest stem represents the earth, the longest and highest represent heaven, and those intermediate represent humanity.

PARK AND CEMETERY.



PROPOSED PARK AT AUSTIN, MINN.

The attractive and enterprising little city of Austin, Minn., is pleasantly situated on the banks of the Cedar River and surrounded by the rich rolling prairies of southern Minnesota.

The stream, with its clear waters mostly derived from springs, describes nearly a semi-circle in its passage through the corporation limits, while the main business street forms a chord to the arc, about a mile in length.

At right angles to this chord from near its northerly end Water street runs east to the railroad station, crossing the river at the point where the flouring mills are located. About three hundred feet west from the river on this street stands a pumping station of the city water works, while between this building and the water, running back some four hundred feet in depth, lies the land about to be improved.

The tract may be briefly described as a slightly rolling area with many fine native trees, oak, ash, elm, etc., about nine feet below the grade of the street, two or three feet above the water in the mill pond, and subject to occasional overflows, which on account of the clearness of the water, soon pass away without depositing mud or rubbish. Along the rear line passes a railroad with side tracks to the pump house, while a wagon road to the building traverses the park from the street. Drains from the boiler and engine rooms of the water works and an electric light plant near at hand, discharge their greasy water into the grounds. Turning to the river front we find that the daily fluctuation in the mill pond alternately covers and exposes a muddy margin; across the pond there is a similar strip of mud, then a few feet of grassy meadow, a side tract to the flouring mills, and a narrow carriage track, the whole included within the limits of a platted street.

The accompanying design, prepared by Frank H. Nutter, Landscape Architect, of Minneapolis, Minn., shows how it is proposed to deal with these various conditions.

The obnoxious drains are to be discarded and connections made with the city sewers; the present driveway abandoned and an approach secured through an alley to the west of the pumping station, thus permitting the grounds of the water works, which in front of the building have been brought to grade of street, to be treated as a part of the park.

In the interests of economy, and to preserve so far as possible the native trees, no change of grade will be made over the larger part of the area, except where necessary to perfect the surface drainage of the park.

Along the street line will eventually be built a retaining wall and low parapet, against which on the park side a thickly planted slope will be raised to about one-half the height of the wall, over which passers-by will look down upon the park. Heavily planted borders will shut out the coal sheds and tracks along the rear lines.

The shore line it is proposed to treat by forming an irregular border of boulders and field stone in sufficient depth of water to avoid any further ex-

posure of the muddy bottom, and extending the lawns thereto; on the opposite side of the river similar treatment will be given, and the strip of meadow between the new shore line and the roadway heavily planted, with a foot path winding through the shrubberies. By this means some rather unattractive outlooks will be shut out, and the mill pond be practically made a part of the park, thus nearly doubling its area. As the size of the park is small, only footpaths will be opened in it and those only on the lines required for the convenience of the public, which will generally be free to wander at will under the trees. Boat landings are provided on either side, as the stream is navigable for several miles. The only other artificial feature will be a pool and fountain situated near the street and discharging into the mill pond under a foot bridge provided to allow for an ample outlet in time of freshets.

A few of the standing trees will be removed on account of overcrowding and to open up some vistas across the park, and what new plantings are made it is intended shall be of such native and standard varieties as shall harmonize with the timber now growing.

In the picturesque shores of the Cedar River, Austin has a mine of beauty, which if properly treated, would make her unique among her sister cities, and it is to be hoped that this park now described may be but the beginning of a larger and more extensive improvement.

A dispatch from London to the *Chicago Tribune*, dated November 7, says: What is alleged to be the discovery of Mr. Garton, an English agriculturist, has been tested exhaustively with the greatest success at the Earl of Winchelsea's experiment farm at Sleaford. It consists of applying the system of cross-fertilization to grasses, clovers, cereals and other food plants. The Earl of Winchelsea's secretary says that the experiments were made not only with plants grown in the United Kingdom but with those of all foreign agricultural countries. Special varieties that are best suited to any particular soil or climate can therefore be produced. The experiments have not been made public hitherto in order that a sufficient quantity of seed might be raised to supply the demand when the important results were made known. Mr. Garton has already received applications from some foreign governments for seed. The United States has effected crosses of wheat, but has not attempted to cross barley or oats. Mr. Garton has succeeded in all his efforts, and Great Britain is thus enabled to take the lead in supplying the world with new varieties of grains. This will be a potent factor in restoring prosperity to British agriculture. Dr. Goodfellow, an expert, writes that Mr. Garton's methods of producing marvelous permanent types of cereals are most unique and original, and that comparatively useless cereals are converted thereby into the most valuable food plants.

THE ANNUAL FLOWER SHOW, CHICAGO.

The annual flower show, which in combination with an art exhibit by the Cosmopolitan Art Club, held in Chicago November 9 to 15 inclusive, resulted in the most successful exhibition yet held by the Chicago Horticultural Society, both in point of financial returns and number of visitors, some 18,000 having passed through the doors. Nor was this the only progress recorded, for a much larger space was brought into requisition, and a more pretentious and important affair than those of former years immediately impressed the visitor.

The chrysanthemum, of course, ruled the exhibit, and from the display it would be hard to credit that this queen of autumn flowers has reached the zenith of its possibilities, or that the people are beginning to grow tired of its annual appearance. In variety of color, in variety of form, both as to individual blossoms and the plants themselves, the display was interesting and instructive, and the possibility of the chrysanthemum as to size to which a single flower can be grown appears not yet to be solved.

The chrysanthemum, however, did not comprise the exhibition, for roses, carnations, geraniums, cyclamen, orchids and decorative plants of all classes, each occupied an important place and were well represented.

Geraniums, exhibited as pot plants, attracted much attention. Never, perhaps, did such a show of fine plants greet a visitor's entrance to a flower show. Those grown by Mr. W. N. Rudd, superintendent of Mount Greenwood Cemetery, Chicago, were simply remarkable for size of plant and beauty and profusion of bloom. By the way, Mr. Rudd was again the banner premium winner of the exhibition. His success in the cultivation of chrysanthemums, carnations and geraniums is very striking, and should stimulate other cemetery superintendents, where opportunity offers, to develop and exhibit their skill in this or kindred lines.

A feature of this exhibition, and one that is gaining more attention, is the matter of table decoration, and some very attractive arrangements were represented in competition for premiums offered. Some private citizens contributed handsome selections of plants to add to the general display, but beyond an exhibit by the Lincoln Park Board the other parks were not represented. This is an oversight. With ample means and facilities at their command park officials should recognize the desirability of contributing to public exhibitions of this character. Such affairs are educational and refining, and the influence of the park might readily be extended to make itself apparent at such entertaining displays.

The efforts of the Horticultural Society of Chicago are rapidly making headway, and year by year we shall witness a growing importance attached to its annual exhibitions.

Other important flower shows recently held, and which taken collectively, show decided progress in American floriculture, are those of St. Louis, Mo., Germantown, Pa., Indianapolis, Ind., Port Chester, N. Y., Milwaukee, Wis., Kansas City, Mo., Worcester, Mass., Philadelphia and New York City.

While Mark Twain was in Dresden, says an exchange, he expressed a wish to meet Dr. Paul Lindau. The result was a dinner given by the American resident there which brought the two distinguished authors together. When conversation became general Dr. Lindau gave his views on America. He had been there for a few weeks and knew it all. In particular he condemned the climate of Florida. Mr. Clemens thereupon spoke up: "I was there some years ago and spent some time in Key West. While at Key West a schooner put in one day with several of the crew dead from yellow fever. Well, there was great excitement in the town and elaborate preparations were made for the funeral. A minister was secured to officiate, and when all was ready he opened his prayer book and read the marriage service. There was no funeral service in the Key West prayer books. They never have occasion to use it."

* * *

"Probably not one person in a thousand knows just why leaves change their color in the fall," remarked an eminent botanist recently. "The green matter in the tissue of a leaf is composed of two colors, red and blue. When the sap ceases to flow in the autumn the natural growth of the tree is retarded and oxidation of the tissue takes place. Under certain conditions the green of the leaf changes to red; under different aspects it takes on a yellow or brown hue. The difference in color is due to the difference in combinations of the original constituents of the green tissues and to the varying conditions of climate, exposure and soil. A dry, hot climate produces more brilliant foliage than one that is damp and cool. This is the reason that American autumns are so much more gorgeous than those of England and Scotland. There are several things about leaves, however, that even science cannot explain. For instance, why one of three trees growing side by side, of the same age and having the same exposure, should take on a brilliant red in the fall and the other should turn yellow, or why one branch of the tree should be highly colored and the rest of the tree have only a yellow tint are questions that are as impossible to answer as why one member of a family should be perfectly healthy and another sickly. Maples and oaks have the brightest colors. People should be careful not to touch the gorgeous red and yellow autumn leaves or shrubs and climbing plants which are not known to be harmless. Our two poisonous native plants display the most brilliant autumnal colors of any species in our woods and highways. The poisonous sumach resembles a group of young ash trees. The poisonous ivy resembles the harmless woodbine. Its leaves, however, have but three leaflets, while those of the woodbine have five."—*Washington Star*.

* PARK NOTES. *

A village improvement society has been formed in Kingman, Me., having for its object the improvement of sidewalks and planting of shade trees. The society is warmly endorsed by the local press. This is as it should be.

* * *

The London, England, parks committee and technical education board have been instructed by the county council to report upon the practicability of laying out plats of ground in certain parks in such manner as will afford assistance to school pupils in the study of practical botany.

* * *

The 1776 stone house at Tappan, New York, was blown down by the wind on the morning of Nov. 2nd. This is the house where Major John Andre was imprisoned, and from which he was taken to his execution Oct. 2nd, 1780. It was owned by Dr. Stephens of Tappan, and has been visited by people from all over the world.

* * *

The average cost for maintenance of the public parks of Utica, N. Y., for the past 20 years is a little over \$4,000 per annum. For a city of between 40 and 50 thousand inhabitants, this is a paltry sum and suggests an early extension of its park system. And yet certain of the local press is objecting to this cost as exorbitant.

* * *

Pennsylvania is rich in Arbor days, two being named to cover spring and autumn. October 22nd, was set apart by the governor for the autumn date. The press of the state is realizing the value of educational effort to promote a full observance of the occasion, and is devoting special attention to urging that the children in the schools and elsewhere shall be instructed to the end that an active and intelligent understanding of the subject may be developed.

* * *

At a meeting of the managers of the Zoological Society, New York City, held last month, at which the Executive Committee reported that the final plan for the Zoological Park and the preliminary plans for ten of the most important buildings for animals were practically complete. It was decided, however, that at least \$60,000 more of the building fund of \$250,000 must be secured before the plans are submitted to the Board of Park Commissioners.

* * *

It is becoming quite general for the larger parks of the country to make displays of flowers in their greenhouses and conservatories at certain seasons, and it has been found to meet with popular approval, as witnessed by the large attendance on such occasions. Such exhibitions in connection with our park systems are quite in line with the work, and are not only educational in a direct sense, but they lead to a better appreciation of park possibilities.

* * *

The Williamsport, Pa., *Times* quotes a writer in an Iowa paper who says the catalpa does not behave well as a grove tree. The said writer's experience in growing a grove which contains about 11,000 trees is that it is a good plan to plant soft maples for quick growth, interspersing them freely with the ash, so that in time the ash can be made the permanent grove by gradually thinning out the maples. He has also tried the black locust mingled with trees that afford a dense shade. This makes one of the quickest groves that he knows of.

Some active park work is projected for greater New York in the next four years. The creation of four additional small parks and eleven public playgrounds in the thickly populated districts of the city have been recommended at an estimated cost of \$4,000,000. Fifty-nine new schoolhouses have been planned or are in the course of erection within the present city limits, and the advisory committee recommends that each shall have a playground either on the street level or on the roof, and that the playground shall be open to children at all seasons of the year, and especially in vacation time.

* * *

Complications in park matters in Indianapolis, Ind., are still hampering the much delayed park system of that city. On Nov. 5th the Supreme Court decided that the act under which the Indianapolis Board of Park Commissioners was created is unconstitutional and that the members of the board are not public officers. The board has existed two years, has received \$374,-000 in city money for a park system, has spent \$10,000 of this amount, and has planned to purchase 800 acres of land, all of which has been surveyed for parks. The city officials contend that as the city borrowed the money for park purposes on \$300,000 bonds, sold in New York, the decision does not invalidate the issue of bonds and that the money realized on them will now pass to the custody of the Board of Public Works, which can continue the park system.

* * *

The question of good roads is a burning one, and every item in connection with such work is interesting. In connection with the subject the New York state agricultural station has given the first order for a device for the amelioration of country roads, which the Secretary of Agriculture suspects of possessing practical value. "It is described as a steel trackway in which wagon wheels may run—a trough or channel of steel eight inches wide, with a slightly raised bead on the inside to guide the wheels. It is proposed to lay these tracks on gravel, without wooden cross-ties, but with steel or iron ties near enough together to prevent spreading. The trackway weighs about 100 tons a mile, and, as supplied by the Cambria iron works of Johnstown, Pa., for the office of road inquiries of the Department of Agriculture, will cost \$3,500 a mile, in small lots." *Harpers Weekly* says: It is possible that in parts of the country where road material is very scarce and mud deep in bad weather these trackways may prove to be worth what they cost. At any rate, the experiments with them will be interesting.

* * *

It is gratifying to note the rapidly growing sentiment in regard to the care of trees. The following from the Taunton, Mass., *Gazette* has the true ring: "The practice in vogue during the past ten years of ruthlessly hacking down any tree, no matter of how magnificent proportions, in order to make room for an unarchitectural building of some kind is being frowned upon owing to the increased appreciativeness of shade and scenery. It takes a tree a long while to grow. After it is full grown it is a valuable piece of property. It cools the earth in its vicinity, it aids in keeping the atmosphere pure, it attracts the birds and throws a faint suspicion of country joys about the bit of noisy city in which it is located. Leave a street which is bare of trees and come to one which has one or two stately elms upon it and note how sensible is the change. It speaks well for the general advance in culture among our people that this movement is being made, and it should increase not only so far as it relates to preserving the trees already planted, but in urging the planting of more that they may grow and add their benefits to the next generation. It is well to remind our young people that shade trees should have greater respect paid to them. We do not begin to appreciate as we should the great value of our shade trees and this fact should be impressed more forcibly upon the children."

CEMETERY NOTES.

The town of Darlington, Ind., has passed an ordinance prohibiting any further burials within the corporation limits.

* * *

Iowa seems to be a favorite ground of the cemetery vandal. Woodland Cemetery, Des Moines, has been undergoing an epidemic of petty-thieving about its graves. The only way to prevent such depredations is arrest and punishment, but to do this an effective policing must be temporarily adopted until the abuse is checked.

* * *

Extensive improvements are contemplated for Oak Hill Cemetery, Evansville, Ind. It is probable that the residence and outhouses which stand at the entrance to the grounds will be cleared away and a handsome building will be erected in their place. Considerable attention is to be given to landscape work. The trustees intend to spend enough money to make the improvements permanent and attractive.

* * *

No more pronounced argument against the Sunday funeral is needed than the unseemly behavior of the curious crowds which on that day invade such cemeteries as are public and free of access. Frequent items are now appearing in the press regarding these Sunday disturbances, in most cases the cemetery officials declaring it impossible to prevent it, thus leaving no alternative but a discontinuance of the practice as far as possible.

* * *

The Catholic Cemetery Association of St. Lawrence, New Haven, Conn., has recently acquired a very large parcel of land, sufficient for burial purposes for many decades to come. The organization has for its object the provision for burial of the Catholic dead of the city, and, as the St. Bernard Cemetery is practically filled, more land was necessary. The property is about two thirds of a mile square. It is proposed to prosecute improvements on the tract without unnecessary delay.

* * *

The beauty of Newton, Mass., Cemetery has been seriously marred by the drying up of their three lakes, due to the sewers constructed by the City of Boston along its boundary streets. It has not only injured the picturesqueness of the cemetery, but caused pecuniary loss in reduced values, and demands for lots about the three lakes. The cemetery corporation asks the city to supply the lakes with water from the mains to reinstate the ponds, which will probably be done.

* * *

There is beginning to be considerable thought given to the improvement of many of our old rural cemeteries, and it certainly is time, says J. H. Hale in the *Connecticut Comet*. "But under old arrangements of high mounding of the graves and no particular system of grading it is impossible to work a lawn mower, and very difficult by any other means to keep the grass well cut and everything tidy. In a number of the old cemeteries a regrading of the grounds is going on and the mounds made so low and easily rounding that a lawn mower can be worked to advantage. But some owners of lots object to any changes being made, feeling that it is a sort of desecration to have the graves altered from their original forms, and where these prejudices cannot be overcome there can be no systematic improvement of the entire cemetery." This suggests continual effort in the direction of educating the lot-owners to the advantages of modern improvements.

* * *

Reading, Pa., is famed for its beautiful location and for the

fact that its public grounds have been largely gifts to the people. Charles Evans Cemetery, consisting of 127 acres, beautifully situated, was donated by a wealthy, childless lawyer of that name, who was born in Philadelphia in 1768. The story of the gift is told thus: An old friend, Mrs. Thomas Morris, who delighted in dainty dishes, occasionally sent to Mr. Evans some of the work of her own hands. These attentions so pleased and gratified him that he on one occasion asked her what he could do in return. She replied: "Nothing for myself personally, but let me beg that you will give your beautiful plot of ground, with its lovely views, to the city as a cemetery." And he did it. Reading is as much indebted to Mrs. Morris as to Mr. Evans for the gift. Its Board of Trustees consists of thirteen of Reading's best citizens, several in years past having adorned high places in the government, and it is considered to be an honor to be one of them.

* * *

In reply to a correspondent in *The American Florist* asking for the six best hybrid perpetual roses, two each of white, rose and pink, suitable for cemetery planting in a light sandy soil, Mr. Wm. Scott replies: It is a pity the soil is light and sandy, for that is not the texture conducive to the production of good roses or a long crop. The name applied to this large and beautiful class of roses is quite misleading; they are hardy, it's true, but by no means "perpetual," and less so in this country than in Europe. Before planting, which is best done in the spring, your "light, sandy soil" should receive a third of its bulk of cow manure. There is such a long list of fine roses it is difficult to choose such a limited list as six, so I have mentioned twelve. The first six can be chosen if you please—Baron Bonstetten and General Jacqueminot, crimson; Mrs. John Laing and John Hopper, rose or pink; Mme. Plantier and Coquette des Alpes, white. Then there is La Brilliante and Senator Vaisse, crimson or deep red; Paul Neyron and Ulrich Brunner, pink; Mabel Morrison, a grand white flower, and Margaret Dickson, almost white.

* * *

The following is a description of the grave of the late George M. Pullman in Graceland Cemetery, Chicago. Whether the fear of ghouls and vandals warrants taking a stride back into the ages is a question for thought: A rectangular pit was dug thirteen feet long, nine feet wide and eight feet deep, upon the bottom of which a flooring of concrete bonded with bands of metal and 18 inches thick was laid. The work was done with the utmost care. After the services the casket, inclosed in a heavy lead lined mahogany box, was lowered into the grave and then workmen wrapped the box in tar paper with an inch coating of asphaltum surrounding this to exclude all ingress of air. The casket was then surrounded with concrete to the level of its top. Eight heavy steel "T" rails were next laid across the concrete and these were tied by two long iron bolts passing through the rails. A half-inch space was left between the box and under side of rails, and a protection was placed over the box to preserve this space. Concrete was again deposited in the hole, covering the steel rails for a considerable depth. Metal bonding was used throughout the concrete work to insure absolute permanency. When the grave was covered in and sodded no sign was apparent of the extraordinary sepulchre beneath.

* * *

Eve Brodlique, writing to the *Chicago Record*, thus describes the cemetery adjacent to Glasgow Cathedral, Scotland: Outside, the slanting churchyard is literally paved with stony slabs, and across the "Bridge of Sighs" rises the necropolis on its hill, a mountain of monuments as solemn background to the ancient church. It is the most remarkable cemetery I ever saw, the paths winding round and round until the whole city of pillars and shafts and pointed stones ends in the gigantic monument to John Knox, fitly, from a Scotch view, topping all. There are learned names a-plenty in this great necropolis, Dr. William

Black, Rev. Dr. Dick, Major Montieth among the others, and if the monuments seemed generally, too, too solid, the columns too pretentious, the epitaphs too long and florid, this is but the personal opinion of one who cares most for the simplicity of death, for the plain slab that covers the dust of a Shakespeare, or the brief slate that marks the resting place of a Wordsworth. One thing I was glad to see, and that was a wreath of flesh flowers on the grave of William Muller, the "Laureate of the Nursery," who wrote "Wee Willie Winkle." The high relief medallion on his tomb showed features gentle and benign, and I liked to think that some loving child had placed these flowers on the grave of a poet who died before the wee decorator was born, all for "Wee Willie Winkle's" sake.

It is reported from Washington that a systematic canvass of the world is to be made in the next four years to determine what tree or trees can best be made to grow in our arid and sub-arid regions. In an interview Professor B. E. Farnow, chief of the Division of Forestry of the Agricultural Department, said, that while the above is the ostensible object, it is likely that the search will lead to a systematic attempt to introduce into this country and acclimatize from all parts of the world the economically valuable trees.

Correspondence.

Returning from the Convention.

SALEM, MASS., October 9, 1897.

Editor Park and Cemetery,

DEAR SIR: I promised you a short account of my trip home from the convention at Cincinnati, which I take opportunity to fulfill.

We left Cincinnati on Saturday morning, September 18, for Dayton, O., and there I found that all our discussion on Sunday Funerals would be of no avail in Woodlawn Cemetery, for on the Sunday we spent there they had six to contend with, one of which was accompanied by a band of music as escort, and with all the gay and gaudy trappings of one of the German orders, with flowers enough to pay a considerable share towards a good family lot, although the deceased in this case was laid in a single grave plot. The other funerals were divided about equally between single graves and private family lots.

We spent Monday looking around the Gem City, and on Tuesday morning left Dayton for Columbus to pay a visit to our Mr. Stephens and family. We arrived at just about the right time, for it was their carnival, and Columbus is a very delightful city; its avenues are good and broad; its side streets are well kept, and, in fact, this applies to all of the public buildings.

Green Lawn Cemetery, the home of Brother Stephens, is a very, very pretty cemetery. The avenues are roomy and the land is very nicely arranged for lots; its single grave plots reminded me a good deal of those of Mr. Stone at Lynn. They are not only well arranged, but are not laid out in some out-of-the-way place; they are given a good, prominent position in the cemetery, and are as well cared for as any other section. Next turning our attention to the office and the books and records, I am compelled to say that if any of our superintendents are looking for modern ideas in the care of cemetery records, I should advise a visit to Green Lawn Cemetery, Columbus, O.

On Wednesday afternoon we left for Cleveland to call on Brother Dix at "Riverside." I have often heard that precious gems are found in small packages, and this proved true at "Riv-

erside." We found Mr. Dix in his new office, which is a beautiful building—everything about it that a man could ask for. The veranda or porch is very attractive, as also the very fine reception room. The office just off the latter has a time lock to the dividing railing, so that friends can come so near and yet so far from the desks. One of the best features of the improvements is that he has used up the old buildings which so disfigured his entrance and residence. The office has been utilized as a carriage and storage house, and the old house that was in the rear of his residence has been removed to the further corner of the cemetery.

This cemetery seems to indicate nothing but prosperity, and I consider Mr. Dix has at the present time as good a cemetery entrance and surroundings as any cemetery in the country.

After Cleveland our next stop was at Syracuse to see Mr. Chaffee. We arrived late in the evening, and found the family enjoying a good open fire, for a steady rain had fallen all day. It was just what they had been waiting for some time, for they had suffered from drought, like all the rest of the western people. After looking over the grounds the morning of the next day, we were entertained on another subject. Brother Chaffee is noted throughout Syracuse as the "kite" man, and his back office reveals kites of all kinds, sticks, twine on reels, wire on reels, cotton cloth, etc. After an examination of the paraphernalia we were treated to an exhibition of kite flying with six kites, all out on one reel of wire, which was estimated to have a length of one and one-half miles. These kites varied in size from four to seven feet in height.

This was our last stop, and we reached Boston and home on Sunday, having tasted much of hospitality and instructive pleasure on our trip.

George W. Creesy,
Superintendent Harmony Grove.

* * *

After Thoughts.

ZANESVILLE, O., October 26, 1897.

Editor Park and Cemetery,

SIR: Since returning from the convention I have been impressed more than ever before with the importance of our work and its extensive field.

Every hamlet, village, town and city has pressing need of the services of the capable cemetery superintendent. While much has been accomplished by our association, it is relatively so small to what is yet to be done that contemplation often leads to discouragement.

But with such leaders and advisers as we have in the association, supported by your incomparable magazine, we may hope to press on until every cemetery in the broad land shall respond to the touch of the master hand of the efficient superintendent. By what means can this much desired end be attained, and in what direction will our efforts result in the most good?

If we could place a copy of PARK AND CEMETERY monthly in the hands of every cemetery official the end would seem possible of realization. I think this might be done by establishing and encouraging State and district associations, and thus lead to every cemetery in the country being represented in our annual national convention. The interest thus induced could not fail of good results.

In this direction I suggested the formation of an Ohio association as an auxiliary to the National to several Ohio superintendents at Cincinnati. The idea was well received, but our limited time prevented active work. I would like to hear from some of the older members on this subject. Yours fraternally,

E. B. Henslee,
Superintendent Greenwood Cemetery.

Association of American Cemetery Superintendents.

G. W. CREESY, "Harmony Grove," Salem, Mass., President.
ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., Vice-President.
F. EURICH, Woodlawn, Toledo, O., Secretary and Treasurer.

Publishers' Department

Park Commissioners and Cemetery trustees are requested to send us copies of their reports.

Photographs and descriptive sketches of interesting features in parks and cemeteries are solicited from our readers.

Mr. Frank Eurich, for many years clerk and superintendent of Woodlawn cemetery, Toledo, O., has severed his connection there, to take the superintendency of Woodward Lawn cemetery at Detroit, Mich. Mr. Eurich will remove to Detroit sometime before the end of the year. His many friends will wish him the same measure of success in his new home that has marked his efforts at Woodlawn.

Crowds about the graves at Sunday funerals at certain of the cemeteries of Cleveland, O., have called forth a very suggestive and timely communication from Mr. John C. Dix, superintendent of Riverside cemetery, to the press of that city. Mr. Dix clearly discusses the situation and shows how such disturbances can be avoided.

Several interesting contributions for the columns of PARK AND CEMETERY have been received during the month and will be published in the near future. Would that more of our readers might manifest an interest in furthering the cause of art-out-of-doors in this manner. Among the matter received is a choice collection of photographs and an interesting sketch of Cascade Park at New Castle, Penna., from Mr. John G. Barker, who has been engaged there during the past summer in beautifying the landscape. * * * Mr. Simonds excellent articles on "Residence Streets" has called forth an interesting paper from Mr. Dean Alvord, of Rochester, N. Y., describing certain street improvements in that city. * * * Mr. Bellett Lawson Jr., contributes a practical paper on the actual cost of improvements in Riverside cemetery, Norristown, Pa., with a photograph of the work in question.

Mr. Frederick S. Hills, of Troy, N. Y., who has issued a number of books of different leading cemeteries throughout the country, has begun the preparation of a historical work entitled "St. Agnes' (Albany) Cemetery—Its Past and Present Associations." Mr. Hills' plan contemplates including pictures of all the best monuments

in the cemetery; a life sketch of every trustee connected with the cemetery since its organization, and portraits of the bishops who have been presidents of the board of trustees. It will record everything of interest connected with St. Agnes' cemetery, and aid in perpetuating the memory of the representative citizens whose remains now rest in its grounds.

The Omaha Convention of the A. A. C. S.

A suggestion has been made in regard to the next convention of the Association of American Cemetery Superintendents, to be held at Omaha, Neb., in 1898, which will greatly add to the importance and instructive pleasure of the annual outing. It is that the cemetery superintendents and the National Funeral Director's Association should meet at the same time in Omaha, and extend the trip to return home by way of the Yellowstone Park and the Northern Pacific to Minneapolis. By this union in a common cause it is possible to secure very low rates and enable the members to gain a maximum of profit, pleasure and experience, which could not probably be secured by any means, other than such a combination, at so low a cost. The two associations can arrange for a joint meeting to the profit of both, there being a common ground of labor, and the only necessary change in plans, is that on account of the climate, it is advised by the authorities that the excursion to the park be planned for an earlier date than that usually assigned for the convention. The preliminary proposition suggests a special train from Chicago to Omaha on August 23rd, a three day's convention in that city, a special train from Omaha to Yellowstone Park, arriving at Lower Geyser Basin on the evening of Aug. 29th, a so-journ visiting points of interest in the park until Sept. 3rd, and reaching Chicago on the morning of September 7th. Such an excursion would undoubtedly yield large returns in many ways and is well worthy of much sacrifice to accomplish it.

Some of our readers may have observed in the newspapers the advertisement of a patent medicine, the illustration of which shows a man falling down a deep well, in which the figure has nearly reached the bottom head first. This advertisement, which is headed Down to Death, was placed in one of the Providence Dailies immediately above the advertisement of Swan Point cemetery. Mr. Timothy McCarthy, superintendent, when mailing us the clipping of this advertising coincidence says: "It may be rough on 'Patent Medicines' but evidently the poor fellow is headed all right."

Like the Colors of the Rainbow. Edging Plants coming from Pampas Grove, Greenland, Fla., charming, bright, compact growing foliage plants. Send for a list or 10 cents for sample dozen.

PARK AND CEMETERY is a first-class journal in every respect. I take many papers and magazines but none better than it. B. D. Judson. Supt. St. Agnes Cemetery, Albany, N. Y.

What is the matter with Indianapolis? Monument and park system under severe criticism and now the following dispatch to the press discloses further trouble: The eleventh annual chrysanthemum show of the Indiana Horticultural society has closed, and it is probably the last that will

be held in Indianapolis. The association finds that Indianapolis does not appreciate the efforts of the florists, and, notwithstanding General Harrison was secured to open the show and much was done to popularize the occasion, the show was poorly attended and the society finds its debts increased.

RECEIVED.

List of Premiums for the New York Gardeners' Society's Grand Floral Exhibition, given at Hotel Astoria, New York, for the benefit of the Loomis Sanitarium for consumptives. This was held under the patronage of some of the best known society ladies of New York, and comprised ninety classes of flowers and fruit for private gardeners only and fourteen classes open to all. The premiums included a number of silver cups, silver medals, certificates of merit and money prizes. The New York Gardener's Society's watchword is "Advance American Horticulture," and the promise of display as indicated by the classes named on the list was grandly fulfilled, according to information just received at time of going to press, and given in another column.

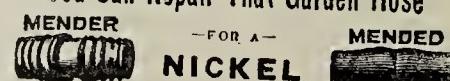
NORTH CAROLINA and Its Resources.
Illustrated. Issued by the State Board of Agriculture, Raleigh, N. C.

This handsomely illustrated volume of nearly 450 pages is the fifth publication of the kind emanating from the Board of Agriculture, which in this state was provided for as far back as 1825. North Carolina has made great strides along all lines of industry, and has been developing wonderful resources most successfully. The climate of the state has been no small factor in its development, having drawn the attention of the more intelligent citizens of other parts. A special feature in its agricultural pursuits is the adaptability of certain sections to bulb culture. It grows and supplies the northern market with millions of tube rose bulbs of the finest quality, and before long lilies and hyacinths, narcissus, gladiolus and other bulbs may be produced in abundance from this state.

CORNELL UNIVERSITY AGRICULTURAL EXPERIMENT STATION, ITHACA, N. Y.
Bulletin 137, May 1897. Agricultural Extension Work: Sketch of its Origin and Progress.

Bulletin 138. September 1897. Studies and Illustrations of Mushrooms, I. By George F. Atkinson. The recent death of Count Vecchi, at Washington, D. C., who was considered an amateur expert on mushrooms, caused by eating a poisonous variety gives this pamphlet extreme importance. Notwithstanding that the edible varieties are excellent and nutritious food, some of the poisonous kinds so closely resemble them that it is dangerous to use so-called edible mushrooms, without expert knowledge to fearlessly identify them.

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BY USING JONES PATENT MENDER. The only one that does not obstruct the flow of water. Easily applied. No tools or bands required. Sold by the trade generally, or $\frac{1}{2}$ -inch, 40c; $\frac{3}{4}$ -inch, 50c per Dozen by makers. **M. D. JONES & CO.** 368 Washington St., Boston, Mass.

PARK AND CEMETERY.

Devoted to Art Out-of-Doors,—Parks, Cemeteries, Town and Village Improvements.

R. J. HAIGHT, Publisher,
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CONTENTS.

EDITORIAL—SMALL PARKS—FUNERAL REFORM—TWO ASPECTS OF THE PUBLIC MONUMENT QUESTION.....	223
RESIDENCE STREETS, IV.....	224
*SUPPLY WAGON FOR FOUNDATION WORK IN CEME- TERIES.....	225
WHAT ARE THE FUNDAMENTAL CONCEPTS IN LAND- SCAPE GARDENING?.....	226
*ACTUAL COST OF CEMETERY IMPROVEMENTS.....	226
THE INFLUENCE OF BEAUTIFUL STREETS UPON PUB- LIC HEALTH.....	227
*CASCADE PARK, NEW CASTLE, PA.....	228
*A MODEL RESIDENCE STREET.....	230
*BATTERSEA PARK, LONDON, ENGLAND.....	232
ROAD MAKING.....	233
*SOME REFLECTIONS UPON MEXICAN BURIAL PLACES.	234
*GARDEN PLANTS—THEIR GEOGRAPHY, XXIV.....	236
COMMERCIAL TREES.....	238
PARK NOTES.....	239
CEMETERY NOTES.....	240
CORRESPONDENCE.....	241
PUBLISHER'S DEPARTMENT.....	242

*Illustrated.

THE development of the magnificent park systems in large cities and their patronage by the general public, has drawn more emphatic attention to the fact that they do not fill the entire bill of needs of the people. The poor and struggling communities still lack, in most places, the opportunities for fresh air and recreation, which the large park affords for those more comfortably situated. It therefore becomes the duty of our city governments to make provision for small parks in their crowded sections and, in reason, the more the better. In what ever light we may consider the small parks in the thickly settled districts of our cities, they suggest good results. Boston, New York and Philadelphia have entered with vigor into a solution of this great question, and in the near future, Chicago promises to follow suit. A word of advice to all city governments is this: Provide for sufficient small park area, while land is reasonable in price, and avoid the oversight which is now costing the tax-payers of many other cities such large expenditures.

FUNERAL reform is rapidly becoming a progressive fact. The pomp and oftentimes munificence of the funeral and burial, which has become so conspicuous by reason of the growing common sense of the people, seems to have reached its limit, for there is a well-defined feeling pervading society that it is time to call a halt to the useless expenditures accompanying these last sad rites. It is gratifying to note that the cemeteries are taking a prominent part in the reform, many of them already forbidding the decoration of graves by artificial accessories, thus presenting a barrier against the perpetuation of really inconsistent sentiment. The fact that simplicity, which is the marked characteristic of educated taste, is gaining force, points to the advantages of denuding funeral ceremonies of all pomp and costly ceremonial, and instead thereof, investing the sad rites with such simple details as will suggest to mourning relatives and friends thoughts that bear fruit in a higher appreciation of man's duty and destiny. The beauty of the modern cemetery under the new order of development has for its keynote simplicity; fewer, but more artistic monuments, set in landscape pictures elaborate only to the extent of the genius brought to bear in assisting nature to make them, but simple in the majesty of that nature, which while entrancing, comforts and consoles with the music of her harmonies. Then, why load the funeral with meaningless encumbrances, or the grave with inharmonious furnishings? If money needs to be dispensed for form's sake, until a wiser spirit prevails, let it be expended in some worthy object—some object that would benefit the living and pay everlasting tribute to the dead.

MONUMENTS as memorials for both public and private purposes may be studied in two phases from recent New York dispatches, and both in preparation for that city. The long expected soldiers' and sailors' monument is now in a fair way of some day being erected, for the commission has practically determined upon a design, after a public exhibition of a number submitted in competition. But the question has been raised whether an amount of \$250,000 is sufficient to produce a public memorial of so important a character, to be located on so splendid a site as is promised for it, and in such a metropolis as New York City. It would seem consistent to believe that the men called upon to decide the important questions involved are equal to

the duty, but there may be oversights in the inception of such a project over which those called upon finally to decide upon details may claim no responsibility. The question involved in this condition of things is, then, the Art Commission, in which should be vested the authority to encourage or discourage proposed monuments, just according as such projects are deemed desirable under all the conditions imposed, both as to site and subject. In a great city there are occasions where a fine site may await a fine monument, while many inferior ones may be offered; and, on the other hand, a fine work of art may await the determination of an appropriate site. There are so many intricate questions relating to the demands of really high art in our cities that require the profound study of the masters of art; and this criticism on the relative values of a proposed monument and its accorded site raises one of the most important questions connected with the artistic adornment of our great cities, and one that requires the most enlightened consideration of present civilization to solve.

* * *

The other phase of the monument question in our cities is that of the donation of works of art, and it is suggested by the proposed gift of a bronze replica of Bartholdi's group of "Washington and Lafayette" to New York City by Mr. Charles Broadway Rouss in memory of his son. There appears to be no stipulation attached to the proposed donation. The group was erected in Paris in the Place des Etats Unis not very long since, and as a work of art is pronounced one of the finest productions of the sculptor. The great historical associations represented by the monument give it an appropriateness as a worthy gift and honor the donor, and this is further emphasized by the fact that unlike so many experiences in art donations, no bothersome strings seem to be hanging to it. But the prominent idea apparent in such a gift is the memorial feature. Time and again these columns have suggested the broad field open to those financially able, to provide for a city's art decoration by such memorials as would preserve, so far as foresight could possibly do, the intention of the mourner, and at the same time make the public responsible for the care of the memorial from the very nature of its possession, its intrinsic value as a work of art, and its educational interest both for the present and future. What greater honor could be devised than that the name of a loved or respected one should be associated with the gift of a work of art to a city's adornment, to be handed along time's pathway, the beauty of the one enriching the memory of the other.

RESIDENCE STREETS, IV.

MATERIALS AND CONSTRUCTION.

It is not the intention in the following remarks to discuss the details for the instruction of builders, but rather to speak of those features which add or detract from one's comfort in the actual use of streets.

SIDEWALKS.

As before stated there are places where the mere walking along a certain line makes a sufficiently smooth and agreeable footway, but usually it is necessary, for the sake of comfort, to build a sidewalk. The first material used has generally been wood. When new a wooden sidewalk is quite agreeable to walk on, especially if the planks have been dressed to a uniform thickness, so that the surface is smooth; but a walk to look well and be comfortable to walk on should be nearly level with the adjacent ground. When so laid the stringers are necessarily placed so that the conditions are favorable to rapid decay. The planks resting on the stringers shrink and swell with changes in the weather, and before very long become loose, so that one is apt to stub his toe, or break his umbrella or cane in walking. On the whole, wooden sidewalks are not satisfactory or economical. Brick sidewalks are durable, and can usually be built for 5 or 6 cents a square foot. They are used quite extensively in many cities, and make a fairly satisfactory walk for the price. Asphaltum walks are smoother, but usually so much tar is used in their construction that they become soft in very warm weather, and then get out of shape. Concrete or cement walks have been used for many years, and have proved so satisfactory in every way that some cities have passed ordinances requiring that all sidewalks shall be constructed of this material. They are more expensive than brick, but are also more satisfactory. As usually constructed they are rather too light in color, especially on bright, sunshiny, summer days. Stone sidewalks are the most expensive of any, and are generally less agreeable to walk upon than those constructed of cement. The latter, if properly constructed of good materials, are also more durable than stone.

ROADWAYS.

Gravel roads are used in many places because of their cheapness, and, if properly constructed, may be very satisfactory. Many of the Swiss roads, which are considered the best in the world, are built of gravel. The most satisfactory road of this kind is one in which the gravel has been screened and deposited in layers of various degrees of fineness, the coarse at the bottom and the fine at the top. It is always a mistake to use

any clay in building a road. Next in order of cost comes the macadam road, which has proven very satisfactory where properly built and taken care of. It should be constructed in a manner similar to that of a good gravel road, each layer being rolled with a heavy roller before the succeeding layer of broken stone is applied. The coarser layers at the bottom may be replaced with slag from rolling mills, where this material is cheap, and will give as good, or better, results than the broken stone.

A smooth wooden pavement is the most agreeable yet devised on account of its quietness, but, as usually constructed, at least in America, it soon becomes uneven and very bad. The difference between its cost and that of brick is so small that in the end the latter is far cheaper. Asphaltum pavements are, of course, the smoothest of any. They are also the most expensive. The objections to them are their slipperiness and the clatter made on them by the feet of horses. The latter objection applies with greater force to the brick pavement. Stone pavements ought not to be considered in connection with residence streets. On the whole, if properly cared for, I believe that for the ordinary residence street the macadam road is most satisfactory on account of its small cost, its durability and its relative quietness. Its care, if continuous, as it should be, will be a matter of small expense. It will include sprinkling and cleaning, which should be done in any case.

CURBING.

With gravel, macadam and asphalt roads curbing is unsightly and worse than useless, since, as before mentioned, it prevents surface water from soaking into the ground where it will be useful to trees and grass, and it sometimes causes serious accidents by upsetting vehicles. With brick and block pavements the curbing is necessary, but the appearance of the street would be far better if the surface of the curbing could be kept even with that of the roadway. Those who advocate the use of the ordinary curbing projecting some distance above the surface of the gutter or pavement claim that it makes a definite line, showing how far the street is to be cleaned; that it prevents driving upon the sod, and keeps the grass from growing into the street. In any case the definite line will come only with care. I have seen grass and weeds growing on the ordinary macadamized street until the curbing was hidden. With a good roadway and

neatly kept border there is no tendency to drive on the grass, excepting where vehicles approach the entrance of a residence. At this point the walk from the house, which is ordinarily built out to the edge of the driveway, is sufficient protection.

O. C. Simonds.

SUPPLY WAGON FOR FOUNDATION WORK IN CEMETERIES.

The accompanying illustration represents what Mr. William Salway, superintendent of the Cemetery of Spring Grove, Cincinnati, O., calls a "supply wagon," and which was designed by him.

The wagon is used to carry cement, sand, brick and water with which to build a foundation or other such work, while the rear part serves as a mortar bed for mixing. The barrel on the front part is an ordinary fifty-gallon barrel, provided with a faucet having a hose attachment, and the hose is provided with a coupling to screw onto a hydrant for filling the barrel. The hose also serves to conduct the water to the mortar bed. This wagon has been found very convenient, more especially for small foundation work, for it has the great advantage of keeping all the needed material together, and consequently saves disfiguring the roads by dirt or other matter connected with the work. It is drawn behind another wagon to wherever needed, and left until required somewhere else.

This wagon being the first that was ever made, cost about \$130, on which Mr. Salway says: "My drawing not being very definite, it caused the builder a little more trouble and expense than the second one probably would."

It will readily be seen what a convenient addition to a cemetery plant this conveyor would become, and its advantages are manifest to those engaged in the practical duties of cemetery work.



CEMENT WAGON.

WHAT ARE THE FUNDAMENTAL CONCEPTS IN LANDSCAPE GARDENING?

If the teacher or writer is to make any subject plain to his pupils or readers he must be able to single out a few simple and fundamental principles. To state facts and rules is to treat only the incidents of the subject. Rules are not final. They express only the experience of the author, or the combined experiences of others; and since experiences vary, the nature and the application of the rules must vary according to circumstances. People are forever misunderstanding what landscape gardening is, because we are always telling them what kinds of trees to plant and how to plant them. But the planter may not know why he plants.

The first instruction which should be given in landscape gardening, I think, is this: The object of landscape gardening is *to make a picture*. All the grading, seeding, shaping, planting are incidental and supplemental to this one central idea. The green sward is the canvas, the house or some other prominent point is the central figure, the planting completes the composition and adds the color.

The second fundamant, I think, is the principle that the picture should have a landscape effect. That is, it should be nature-like. Carpet beds are masses of color, not pictures. They are the little garnishings and reliefs which are to be used very cautiously, in the same way that eccentricities and conventionalisms in a building should never be more than very minor features.

Every other concept in landscape gardening is subordinate to these two. They are explanations of the means and methods of making the picture. Some of the most important of these secondary, yet fundamental, concepts are as follows:

Conceive of the place as a unit. If a building is not pleasing, ask an architect to improve it. The real architect will study the building as a whole, grasp its design and meaning, and suggest improvements which will add to the forcefulness of the entire structure. A dabbler would add a chimney here, a window there, and apply various daubs of paint to the building. Each of these features might be good in itself, the paint might be the best of ochre or ultramarine or Paris green, but they would have no relation to the building as a whole, and would be merely ludicrous. These two examples illustrate the difference between landscape gardening and the scattering over the place of mere ornamental features.

Have some one central and emphatic point in the picture. A picture of a battle draws its interest from the action of a central figure or group. The moment the incidental and lateral figures are made as prominent as the central figures the picture

looses emphasis, life and meaning. The borders of a place are of less importance than its center. Therefore:

Keep the center of the place open. Frame and mass the sides.

Avoid scattered effects. Flowers and high-colored foliage are most effective against a background of green foliage. A flower bed in the middle of a lawn is only a flower bed; against the border planting it is not only a flower bed, but it may also be a structural part of the picture.

Flowers are incidents in a landscape picture. They add emphasis, supply color, give variety and finish; they are ornaments, but the lawn and the mass-plantings make the framework. One flower in the border and made an incident of the picture is more effective than twenty flowers in the center of the lawn.

More depends upon the positions which plants occupy with reference to each other, and to the structural design of the place, than upon the intrinsic merits of the plants themselves. *L. H. Bailey.*

ACTUAL COST OF CEMETERY IMPROVEMENTS.

From time to time articles appear in PARK AND CEMETERY on the improvement of new ground in cemeteries, but none of them give any figures on the actual cost of such work. Cemetery associations, as a rule, greatly exaggerate the cost of improve-



NEW WORK, RIVERSIDE CEMETERY, NORRISTOWN, PA.

ments. This may be all very well from an advertising standpoint, because it tends to magnify the cemetery in the eyes of the lotholder and the general public, but, nevertheless, all this is very discouraging to the reader who has a small cemetery to develop.

Now, to illustrate what can be done with a little money, judiciously spent, let the reader look at the accompanying view and compare the figures given herewith, which is the actual cost of the work. There are 930 feet of "macadamized" road, eighteen feet wide, with eight inches of quarried stone and

four inches of crushed limestone, all sprinkled and rolled with a fifteen-ton steam roller.

The road brings about six acres of land into use for burial purposes.

COST.

Waste stones (or spauls) purchased in a neighboring quarry.....	\$38.20
Labor, quarrying stones, grading and laying pipes.....	327.91
Sewer pipe.....	82.60
Trees, grass seed, etc.	19 00
Horse hire.....	70 00
Steam roller, one day.....	12.00
Street sprinkler, one day	5 00
Three hundred tons crushed stone.....	210 00
<hr/>	
Total.....	\$764.71

These figures may seem small to the general reader, but they are the actual expenditures. It must also be borne in mind that the work was not slighted in the least. As stated before, the improvement brings about six acres of ground into use for burial purposes, and while there is little filling in to be done, \$50 would cover the expense. Of course, a certain bareness prevails, but that will wear off as nature takes its course and the trees, shrubs, etc., grow. The accompanying view shows about one-third of the work mentioned, and was taken ten days after the road had been completed.

Bellett Lawson, Jr.

THE INFLUENCE OF BEAUTIFUL STREETS UPON PUBLIC HEALTH.

The importance of properly developed and carefully maintained streets, together with their many functions, is well set forth in an article in *The Sanitary Record*, of London, from which we take the following:

City streets, with their pavements and other equipments, affect each man, woman, and child. The air and daylight come to the dwellers in cities principally by means of the spaces provided by the streets.

Consider for a moment a few of the many questions involved in modern street construction. Each of the following matters must be provided for, and their relative importance and position kept in mind, by our city engineers and others who attempt to administer our thoroughfares. They must provide for air; natural light by day and other light by night; surface drainage; sewers; pavements of roadway and sidewalks; water pipes; hydrants; wires and their arrangement, above ground when necessary, and under ground when possible; and boxes for post-office, police, fire-alarm, and other purposes. We have need of places of public comfort, so necessary to the health and convenience of the dwellers in dense populations and so lacking in too many cities.

Drinking-fountains for man and beast should appear at reasonable intervals. * * * Fountains, moreover, make a city homelike, and can be made after handsome patterns, thus beautifying the streets.

Special stands for affixing posters and other advertisements are in use in Paris, Berlin, Frankfort, and elsewhere. They prevent advertising from becoming an eyesore.

The subterranean arrangement of the conduits for water, gas, steam, compressed air, electricity, and other appliances, is complex, and demands the combined experience of many men. All of these things seriously affect the pavement, and especially its maintenance or repair.

The construction of pavements and roads requires as close observation, study, and supervision as other technical work. France set the example in this connection when it established during the last century its engineering school of bridges and roads. Men were trained, scientific methods were employed, and experience was recorded for the benefit of the existing and each succeeding generation. Almost every one can think of a city, or part of a city, with disagreeable streets, either without pavements or surfaced with poor pavements which absorb, breed, and disseminate germs of disease; pavements which cannot be thoroughly cleaned, obstruct traffic, cause useless noise, and are an injury to the health, comfort, and wealth of the community. Such pavements drive away successful men, and prevent new and energetic men from coming to the city and giving it the benefit of their capital and energy. A city, to succeed, trust properly pave its streets, keep them in repair, and clean them.

The utility, economy, and beauty of a pavement, fortunately, go hand in hand. The best pavements are those which are laid on solid foundations and have smooth or even surfaces. They either have no joints, or the joints are made impermeable to moisture. Such pavements are the best for wheel and foot traffic. They are the easiest to keep clean and in repair. All expenses considered, they are the most economical, and at all times handsome and attractive.

Street engineers of true worth are as much needed as bridge, sanitary, hydraulic, landscape, and other engineers. All are sub-divisions of civil engineering. Such men are steadily replacing mere politicians and the ignorant or apathetic employes of cities or contractors. They accomplish maximum results with minimum expense. They unite theory and practice of the past and present. They have access to the recorded experience of others, and thus avoid useless experiments.

The sale or rental value of real estate increases beyond the expense of the improvement when a good pavement has been laid, especially when noise has been guarded against by proper choice and laying of material. Noise was formerly regarded by many as a necessary evil in connection with durable pavements. The asphalt, wood and brick are used with success in reducing noise. Some brick pavers, however, when laid in cold weather and with rigid base, often give forth a disagreeable, hollow, rumbling sound.

It is natural and proper that people should take pride in a street well furnished with all that serves the needs of a high civilization. Such streets and their pavements benefit those living upon them. They cause

an improvement in the appearance of the people—especially in tidiness of houses, dress, and even manners—in the poorer parts of cities.

The health of the people is improved, and the death-rate diminished, where impermeable pavements are used. The dust and dirt which get into our houses come from the street. Disease germs are thus brought to us when a kind of pavement which absorbs or retains matter is used in a densely-populated city.

CASCADE PARK, NEW CASTLE, PA.

Cascade Park is located three miles from New Castle, Pa., and is the property of the New Castle Traction Company. A part of the grounds was used for many years as a picnic ground, and previous to its coming into the hands of the present ownership no pains were taken to develop it in any way. The buildings were very crude, and not in the least adapted to the wants of a growing community. On April 12 last active operations were commenced to improve the grounds under the direction of Mr. Frank M. Blaisdell of Boston, the well-known landscape architect of Driving Park, Portland, Me., and of Norumbega Park, near Boston, Mass., and the work of developing Cascade Park from its commencement has been under the supervision of John G. Barker, for many years chairman of the Garden Committee of the Massachusetts Horticultural Society; also well known in cemetery work in Massachusetts, and now associated with Mr. Blaisdell. Probably no site could have been found anywhere that possessed more natural beauty and was better adapted for park purposes than Cascade Park; such a combination of the beautiful in nature, hill and

dale, added to great variety of evergreen and deciduous trees. The rocky Big Run (so called), with high cliffs as suggested in illustration, gave unusual opportunity for artistic development, and, indeed,



RUSTIC SHELTER IN PICNIC GROVE.

every effort has been made to improve and not destroy nature; to bring out more vividly the hidden beauties in this delightful spot. To some extent this has been carried out, and by careful thinning out of underbrush many fine specimen trees can be developed in the near future, and attractive vistas opened, which always add charm and beauty to any place. This idea has been grandly developed at the beautiful Druid Hill Park, Baltimore. Cascade Park is created for the pleasure of the people, and the patronage which has been accorded to it is abundant evidence of their appreciation.

The first task in the project was to have the park sufficiently advanced to open it on Decoration Day; this was accomplished with some difficulty, for there was much wet weather to contend with, and two large bridges to build and a long avenue to macadamize. The old buildings were all razed to the ground, and the pavilion, about 140 by 75 feet, was erected and finished by that time. There has been added since a dining hall and a merry-go-round building, a band stand, a rustic stable for the animals, a terminal station, four rustic bridges and nine rustic houses and shelters.

The corporation has constructed a terminal station, a unique and very appropriate building, with all modern conveniences, and the fine trees in the background bring out the outlines and proportions of the building. It is intended to improve the ground in front of the station, which is now rough and unimproved, by arranging a sunken garden, which will be an attractive feature as the station is approached from the city, while from the cars one



CAT ROCKS, WITH RUSTIC LOOKOUT ON THE SUMMIT.

can look on to the flower beds, always the best way to see them, as first impressions are the most lasting. The grounds here will be made attractive. Alighting from the car, and passing through the station into the park, attention is immediately directed to the spring, which is built up with natural stone, the water running over all the time. This is brought a distance of nearly two hundred feet from the rocks at a high elevation; it is very pure and inexhaustible. Directly in front of the spring a large-sized bed has been arranged with choice native ferns and flowers; the stones are now somewhat bare, but will in a short time be covered with vines, which will take off the artificial appearance. This is a very pleasing and welcome spot and, as may be imagined, the spring is freely used. A little further along the scene changes; the rocky cliff is called Cat Rocks, why, the writer hardly knows.



THE CASCADE.

Some say a perfect picture of a cat can be seen in front of the rocks; others say that long ago a hunter's dog chased a wild cat to the point seen in the picture, both going at a rapid rate, and both went headlong over the rock into the creek below and were killed. Whatever may be the legend, a fine natural scene is displayed.

The rustic shelter stands on the highest elevation of that part of the park which has been developed, and when the foliage is off the trees a splendid view of the grounds and surrounding country is seen from this lookout. In this connection it may be said that every rustic building is placed for a purpose—a fine view, a proper resting place, or a quiet nook to read in; they are not dropped anywhere for the sake of having a given number. The illustration shows a portion of the first rustic bridge that was built, at the end of which is a large rustic vase, four feet six inches in diameter. One such

vase is placed at each corner, and add greatly to the appearance of the bridge. There is a small dam in the creek within a few feet of this bridge, and whether one is resting on the bridge or in the house on the rocks, with the noise of the water, the people passing to and fro, the birds singing and the innumerable little squirrels running close by, there comes a sense of rare beauty, coupled with clear and beautiful air at all times, better enjoyed than pen can describe.

Passing on we come to the picnic grove, another delightful spot. The trees are hemlock, oak and maple, with hemlocks predominating. In the warmest days this spot is always cool and remarkably free from insects of all kinds; this may be attributed to the strong aroma from the hemlocks. Ample provision is made for seating large companies at tables, and a liberal-sized rustic shelter is located in this grove. The Zoo at present contains only a small collection of animals—deer, elk and a pair of black bears. Continuing our walk along the cliff of the Big Run we pass three more rustic shelters, each being located for a special purpose, and reach a rustic foot bridge, which crosses the dam. It is twelve feet wide by sixty feet long, and is a well-designed structure. After crossing this bridge one is in the park proper, where the buildings are diversely located, but within a short distance of each other. A visit to the cascade, illustrated, affords a beautiful view, and a platform has been erected with the sides protected by a rustic fence; an electric light illuminates the scene at night, and makes this spot as interesting as by full daylight.

The future will undoubtedly see the continued development of this beautiful spot, which in natural beauty and opportunities for the highest development can hardly be excelled.

Speaking of the chrysanthemum in its Japan home, a writer in the *Chicago Times-Herald* says: The flower market in Tokio is a sight never to be forgotten. In every ward of the city there is a flower market three evenings in the month, so that you could go to a different one every night and yet not see them all. Here is an extract from a diary, telling of a visit to one of them: "The festival was held on one of the principal streets, and it was just filled with men, women and children; yet not a sign of jostling or pushing, so different from one of our crowds at home. The chrysanthemum was the flower of the evening, for it is early in November, and the street was illuminated with torches and lanterns. I never even dreamed of anything so glorious as this display of flowers. And all to be bought for a mere nothing. Of course the usual bargaining and haggling has to take place. Why, they offer you for 10 sen (5 cents) a plant that you could not buy at home for \$5; it does seem mean to beat them down. But when you see the alacrity with which the vendor accepts an offer of 5 sen, if you show any intention of moving away, then your conscience is a little easier."

A MODEL RESIDENCE STREET.

In his article on "Residence Streets," in the September number of PARK AND CEMETERY, Mr. O. C. Simonds expresses the opinion that "the artistic treatment of a residence street is as important as the acquiring of beautiful public parks."

The writer of the present article assents to all that Mr. Simonds' statement involves and believes, further, that the beauty of a city as a whole depends far more upon the character of its streets than upon any system of elaborate but remote parks.

Almost every city can point to one street or avenue the beauty of which has given it a reputation as wide as that of the city itself. One handsome thoroughfare, however, does not make a beautiful city. The problem of civic beauty is presented in the *average* residence street.

Some of the readers of PARK AND CEMETERY may be interested in the result of an attempt to solve in some measure, this problem.

The street in which the experiment here recorded took place, was opened two years ago in a medium class residence section of Rochester, N. Y. The width is sixty feet, the location possessing no natural advantages over other streets in the vicinity.

The surface improvements on most of the streets in the neighborhood consist of a roadway twenty-eight or thirty feet between curbs and built of gravel, macadam, brick or asphalt; rough cut stone curbs in four foot lengths and gutters of the same material twelve inches wide; a grass space between sidewalk and curb from four to eight feet in width and decorated with a row of trees which vary as to size, kind and distance apart according to the fancy of the individual owners of the adjoining frontage. The remainder of the sixty feet is devoted to sidewalks having a width of four to five feet, and a strip of lawn inside the walk practically belonging to the lot owner. The lots fronting on the street range as to grades from the sidewalk level to terraces of from one to three feet. In several instances, even though the sidewalk and streets maintain a perfectly uniform grade (nearly level), the lots constitute a series of terraces as though each owner were ambitious to live a little above his neighbor.

The accompanying diagram illustrates the character of the improvements and, to some extent, the appearance of Dartmouth Street. The method of construction is as follows:

First: A main sewer was laid with laterals leading to the inside of each of the lots so as to prevent future tearing up of pavement, sidewalks, ornamental plots, etc.; gas and water mains, with similar laterals were also put in place, the gas main being laid between the sidewalk and the curb on

one side of the street and the water main in the same location on the opposite side.

The next step was the laying of a combined curb and gutter of the "Parkhurst patent" being made of Portland Cement, sand, etc., upon a foundation of concrete. This curb, which was new to this section, is almost as hard as granite and has successfully resisted the frosts of two winters. It is not only handsome in appearance, but there being no joint between the gutter and the curb, all water is carried to the surface laterals, and does not find its way beneath the curb and pavement to the detriment of the latter. A six inch concrete foundation with a five inch crown was then laid over the entire street between curbs. On this was laid a half inch sand cushion, and a pavement of vitrified brick laid in rows at an angle of thirty degrees (not at right angles, as shown in the cut.)

After the pavement was thoroughly tamped into place, liquid cement was poured over the entire surface binding the bricks together in a solid mass. The curbing at the street intersections is turned on a radius of thirteen feet.

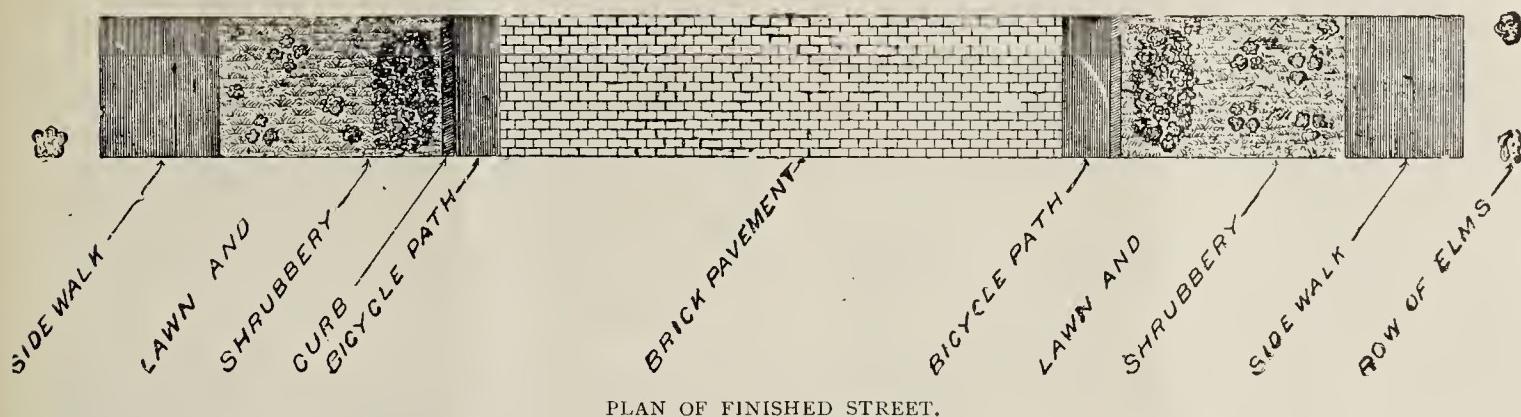
Five feet cement sidewalks were next laid allowing a space of ten feet between sidewalks and curbs for decorative purposes. The customary triangular space occurring at the intersection of the sidewalks at street crossings is filled with cement, identical with the sidewalk, thus avoiding the four patches of bare ground usually seen at street corners.

A scheme was devised for permanently marking the location of the sewer, gas and water laterals, also the lot lines which does away with the usual stakes. Dies were made with the letters "S." "G," and "W.," indicating, sewer, gas and water. They were impressed into the fresh cement of the sidewalk as it was laid, indicating exactly the location of the pipes. To indicate the lot line an "arrow" was used in the same manner. This plan obviates unnecessary digging in search of these pipes at the time of building.

Thus much for the utilitarian. Now as to the artistic features.

It will be observed that the shade trees are set inside of the sidewalk, leaving a strip ten feet wide between the sidewalk and curb for purposes hereinafter described.

The trees selected were American Elms, set fifty feet apart, one at the corner of each lot. The shrubbery used in the decoration of the street between sidewalk and curb was selected with a view to variety of foliage and flower, and only those varieties employed which are naturally dwarf or which, by careful pruning, could be kept so low as not to obscure the view across the street. Every-



thing used is hardy and requires only ordinary care. The following varieties were planted either in groups or singly, according to the nature of the shrub or the effect to be produced.

Cornus Paniculata and *Cornus Alba* were employed in oval masses six by twelve feet. The California Privet, Spirea Thunbergii, *S. Prunifolia*, *S. Van Houti*, *S. Billardi*, *S. Sorbifolia*, *S. Hypericaefolia*—*Mahonia Aquafolia*, and the *Rosa Rugosa* (*Rubra* and *Alba*) were used in a similar manner. The Berberries, (*Purpurea*, *Thunbergii* and *Canadensis*,) in circular masses, eight feet across; the Weigeliae, *Variegata* and *Rosea*; the *Philadelphus Aureus*, *Kerria Japonica*, *Hydrangea Paniculata*, Tamericks (cut close to the ground every year after flowering) completes the variety of shrubs, planted in masses.

Among herbaceous shrubs are circular beds of the Eulalia—*Japonica*, *Zebrina*, *Variegata* and *Graecilliana*, varieties *Hibiscus Muscatus* and *H. Crimson Eye*.

Interspersed in the stretches of unbroken lawn between the massed shrubbery are single specimens of the *Magnolia Soulangeana*, *M. Sellata*, Siberian *Arborvitae*, and *Arborvitae Globoso*, Golden Oak, English Hawthorne, *Aeschylus Parva Flora Xanthicera Sorbifolia*, *Euonymus Erectus*, and *Pinus Mughus*; the latter in groups of three.

Several thousand crocus of the yellow, white and purple varieties were planted carelessly in the edges of the shrubbery beds. It will be seen that the varieties were selected so as to produce a succession of bloom until late autumn, in addition to the fine foliage effect during the entire season.

Possibly the writer possessed some advantages in the laying out of this street which contributed to the effect produced, in that he controlled the frontage on both sides throughout its entire length. Not only was the grade of the street established, but all lots on either side were brought to a finished grade, and purchasers of the same were placed under the following rigid restrictions:

"The grades of all lots as established shall not be changed."

"Persons building drive-ways to their lots, shall

curb and pave the same from street curb to sidewalk, identical with the street."

"All houses shall stand twenty-five feet from the front line of the lot, and three feet from the north line, thus giving all houses a southern exposure."

"No fence or hedge will be allowed in front or between the houses nearer than the rear wall of the house."

"No walk shall be laid upon a lot of any material other than stone or cement, and all walks from street sidewalk to curb, shall be five feet wide."

These restrictions have been fully lived up to, and so attractive has the street become within two years, that nearly every lot has been sold, and at a price of five hundred dollars more per lot than those on streets in the immediate vicinity laid out on the old plan, showing that the people fully appreciate beautiful surroundings, and are willing to pay for them. The effect of the beautifully kept street, which is never sprinkled, but which is thoroughly swept two or three times a day, has been marked upon its residents who have taken the utmost pride in keeping their lawns and grounds on a par with the street.

One or two residents who had removed from ill-kept and slovenly streets were, at first, inclined to be a little negligent of their grounds, but the influence of the neighbors and the effect of the street was too much for them, and their places are now equal to the best.

The contract for the care of the street, including lawns and shrubbery as well as the sweeping of the pavement, is awarded by the authorities, upon the unanimous petition of the residents, to the writer who employs a competent person to do the work under his direction.

Dean Alvord.

It is asserted by a writer in the south that the daisy was not known in that section of the country until Sherman marched to the sea. This writer says that Sherman brought the daisy seeds south in hay needed for the horses, and that the Sherman line of march is indicated by the existence of the daisies.

PARK AND CEMETERY.

BATTERSEA PARK, LONDON, ENGLAND.

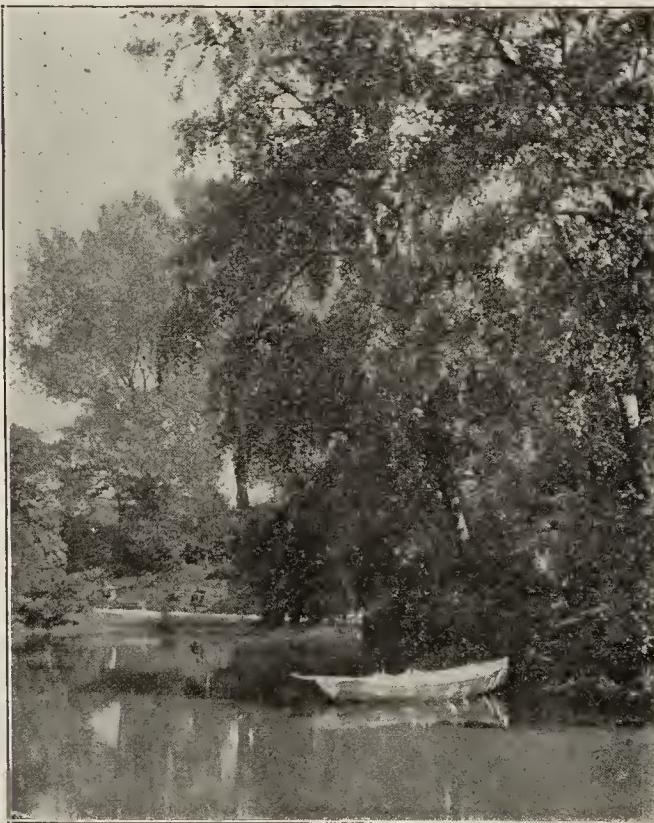
Of all the parks of London that of Battersea afforded me the most pleasure when visiting several of them in the summer of 1895. Battersea is one of the people's parks, so called to distinguish them from the Royal Parks.

The people's parks are under the management of the London County Council, and are managed by their park's committee. Battersea, Victoria, Finsbury and other ones are of this class, while the Royal parks are such as St. James', Regent's and Hyde.

Beautiful Battersea, as it is to-day, is wonderfully different from the bog it once was, for, as I have been informed, the site was at one time but little more than a malarious swamp. The art of the landscape gardener has made of it one of the most beautiful parks of London. The park is a favorite resort of cyclists, the splendid roads surpassing those to be met with elsewhere.

The Council appears in no way niggardly in its appropriations of funds for the maintenance of the park, everything appearing to be done in the best manner, to give the people enjoyment.

Two views of the park are herewith presented, both of them embracing a portion of the lake. Your readers will agree with me that both are most beautiful. The trees and shrubs fringing



BATTERSEA PARK.

the bridge are composed of such sorts as Ailanthus, Cotoneasters, Rhustyphina, Berberis in great variety, clumps of furze, purple filbert and Jasminum revolutum. Close to the water, especially on the island, such kinds as Heraclium giganteum, Polygonum cuspidatum and P. sachalanense, Spirea sorbifolia, Paper mulberry, Brousonetia papyrifera, and like plants are freely used.

The aim everywhere in such situations has been



BATTERSEA PARK.

to produce a likeness of nature, and well have the efforts been rewarded. Visitors from the rural districts can hardly realize that they are in the midst of mighty London, so rural and quiet are the surroundings. And how the people do enjoy these parks. It was a blessed thought which first led to the formation of city parks. The elm does splendidly in these parks, and though, if I mistake not, the elm leaf beetle which plays havoc with the foliage of our trees, came to us from England, it does not appear to injure the foliage of the trees in their parks or elsewhere there.

I may have mentioned before in some of my letters that the thick, round headed growth of trees is peculiar to England, in comparison with those of our own forests. The bushy growth will be noticed in the view which takes in the bridge, but there are some Lombardy poplars in the background which are evidently well placed.

The trees and shrubs of England do not put on the rich autumn dress of ours. They keep up their dark green hued foliage to the last.

Joseph Meehan.

The largest known flower is said to be the Raffl of Sumatra, whose diameter is nine feet, and which smells like a piece of putrid beef.

ROAD MAKING.

At a recent meeting of the Engineers' Club of Philadelphia, Mr. Benjamin Franklin read a paper on "Some Features of Stone Road Construction" which led to a spirited discussion between the advocates of the rival systems of Telford and Macadam. The following abstract of the discussion is gathered from the *Philadelphia Public Ledger*:

Mr. Franklin is an advocate of macadam roads, and the great point of his paper was that such roads can be constructed at a low cost in comparison with Telford roads, especially in sections where stone is not plentiful. He gave examples of macadam roads with only four inches in depth of material, which had worn well for six years without wearing into ruts, the foundation being coarse sand and fine gravel. He deprecated the use of clay in any proportion in any part of the structure. Sand and gravel would not shift, but clay permits the metal, or stony material, to shift its position under the pressure of traffic, whether it is used as a binder on the surface or in the foundation. Good drainage of the foundation and rolling the bed upon which the road is to be laid to a uniform consistency are essentials in all road building.

Upon the foundation of sand and gravel Mr. Franklin would use a layer of trap rock, like Bergen stone, broken into three-quarter inch cubes. Upon this he puts a surface dressing of stone dust or screenings. Each layer is compacted with a heavy iron roller weighing from ten to fifteen tons, the layers being meanwhile kept wet with a sprinkler. He also has the road well sprinkled for some months after it goes into service. Roads of from four to eight inches in depth can thus be built throughout a section where the more expensive system would not be undertaken.

Thomas G. Janvier, who is a strong advocate of the Telford system of road-making, pointed to the roads in Delaware county, Pa., constructed under his specifications and supervision as proof of their superiority. He believed in a certain proportion of clay as a binder. The chief advantage of the Telford, in his opinion, is in the foundation, which consists of stones eight or ten inches long, laid upon a well-rolled bed, in regular rows across the road, the same as Belgian blocks are laid, the interstices closely chinked with stone chips and the surface made perfectly even. Upon this is placed a layer of three-quarter inch trap rock, covered with a dressing of clay, stone screenings and dust. A road so constructed in Delaware county, with an eight-inch foundation, four-inch layer of trap rock and surface dressed, cost 65 cents a square yard; it used to cost from 90 cents to \$1.10.

The other engineers who took part in the discussion on one side or the other pointed out that, while first-class roads could be made by either method, care in the selection of the material and in the details of construction were really the chief elements in the problem.

Mr. Schermerhorn, who said he introduced the first road roller into this country in 1862, thought the disputes about the value of the two kinds of roads had arisen largely from the fact that what were called Macadam and Telford roads in this country were very differ-

ent from the solid construction seen in Scotland, where these systems originated. He then described the roads, fifteen inches deep, which he had seen there, and in comparison with them the roads which were called Telford that were laid in Central and Prospect Parks, New York, twenty years ago. In the latter place the stones, of all sizes, were dumped upon the road bed and clawed over. This formed the foundation, very inferior indeed to the careful selection of stone by sizes, chinked by granite chips, and surfaced with broken flint and trap rock, which he had seen in Scotland. He believed the great advantage of the Telford to lie in the better distribution of weight which the large bottom stones afforded.

Other speakers called attention to the great difference existing between stones of the same name in their physical characteristics while chemically they were much the same. Dr. Leffman showed some lantern slides illustrating the construction of the old Roman roads, "built to last forever," which showed that, however much the officials of the Empire may have been corrupted, their public works were a credit to them.

Much credit was given by the members to wheelmen for their agitation of the subject of good roads and for the success which has attended their efforts.

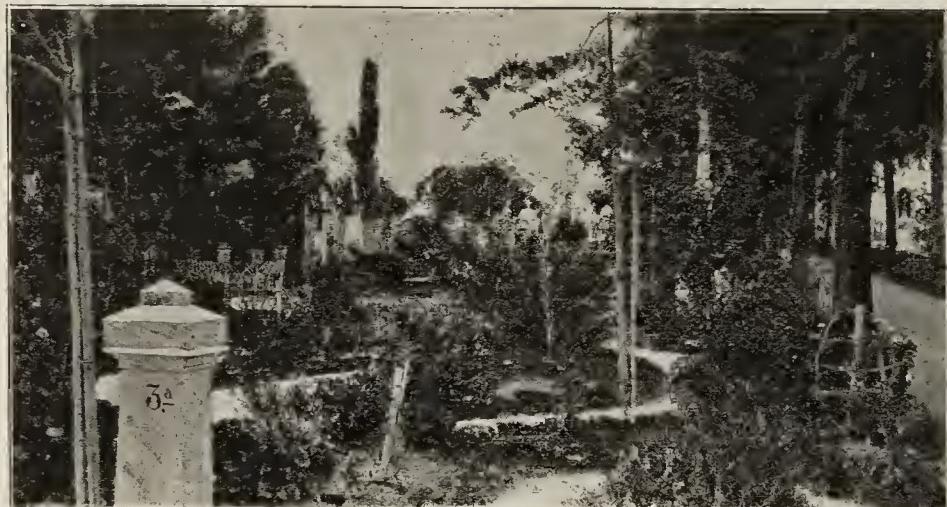
A good remedy for killing out the cut worms in the garden is to make up a mixture consisting of a quantity of bran or cornmeal moistened with water, to which is added a little Paris green and a little molasses or sugar, to give a sweetish taste. It is Paris green that kills the worms, and this should be very thoroughly mixed with the bran, so as to have a uniform mixture. A spoonful of this mixture should be placed near the plants just before night on the day the plants are set out. The cut worms work at night, and will be killed by eating of the poisoned mixture. It is much better, however, to place the mixture about in various parts of a field a few days before planting, as it will then kill off the worms before any damage is done.—*The Minnesota Horticulturist*.

* * *

Every lover of art knows of the celebrated works of Meissonier, the painter. Now Meissonier not only could paint, but he could tell a good story, and he was especially fond of relating this little anecdote of his gardener, whose horticultural erudition was remarkable. A smattering of learning is a dangerous thing, and Meissonier's gardener had a little knowledge of the Latin tongue, which he was fond of using to name his different plants. Meissonier for a long time was skeptical of the correctness of his gardener's Latin, so one day he set a trap for him by giving him the roe of a red herring and asking what seed it was. Without hesitating the gardener gave it a long Latin name, and promised that it would bloom in about three weeks. Meissonier chuckled to himself, and agreed to inspect the blooms in three weeks or more. When the time came the painter questioned his learned horticulturist about it, and that party led him into the hot house to an enormous flower-pot. There, sure enough, were the blooms in the nature of the heads of six red herrings just emerging from the dirt in the pot. Meissonier breathed a deep sigh, and shook his gardener's hand, exclaiming: "What a wonderful man you are!"—*Harper's Round Table*.

SOME REFLECTIONS UPON MEXICAN BURIAL PLACES.

Apart from the instinct of self-preservation which makes us averse to dying anywhere, there are various reasons why we are not especially anxious to die in Mexico. The burial customs of that country are not agreeable to Anglo-Saxon notions, and the burial places are anything but attractive.



"DOLORES."

There are some cemeteries in the world to which we may apply the hyperbolical expressions, that they "rob death of some of its terrors," and that they "make one in love with death," without depriving those expressions of all their meaning. But no one who has seen even the finest of Mexican burial places would think of using any such language in speaking of it. To my mind, the cemeteries I saw in the provincial towns invested death with added terrors.

Usually the sites selected for them were the least attractive in the neighborhood. They were greatly neglected and barren of vegetation, except in the more tropical portion of the country, where neglect manifested itself in the too rank growth of indigenous plants. The roads to them were strewn with the refuse of the town. And the idea conveyed to the visitor was that of a mere dumping ground for something with which the residents of the town were through. Only on "*El Dia de los Muertos*," (All Souls Day, November 2nd.) do the dead in them appear to have any rights which the living are bound to respect. Then the graves are profusely decorated with flowers; (artificial mostly, like the emotions they symbolize,) but the effect of this spasmodic attempt to show some re-

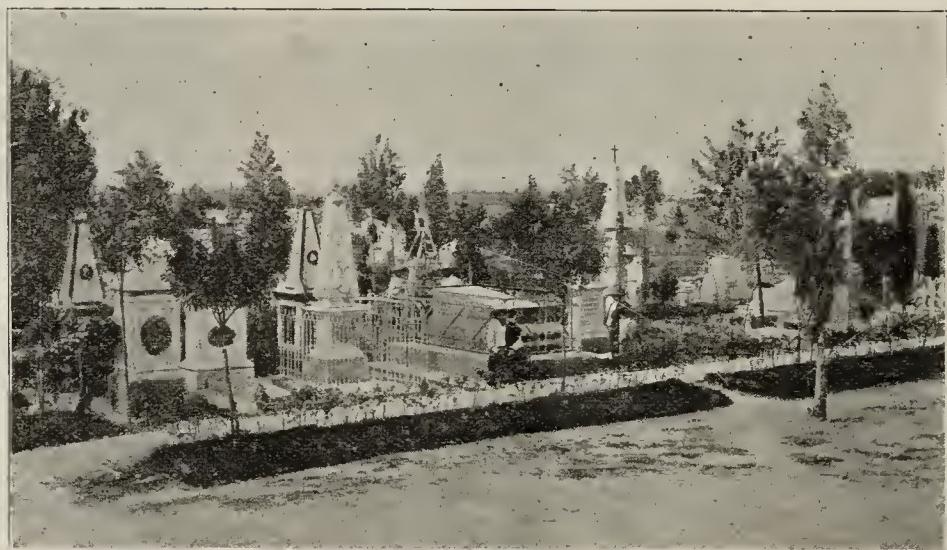
spect for the dead was never altogether pleasing.

The burial places of the larger cities of the Republic, and more particularly of the Capital, are more pleasing in their outward aspect, but upon closer examination, even they are almost sure to reveal some feature that will cause disgust. More than likely it will be an indication that the cemeteries are but temporary receiving tombs,—mere lodging places, to most of their occupants,—to all in fact, excepting those whose tombs are distinctly marked "*In perpetuo*." The right of perpetual interment is purchasable, but at a price that is prohibitive, save to the very wealthy. And all tombs not thus inscribed are emptied of their occupants when their leases expire. What becomes of the tenants then, it were safer not to inquire.

The grim humor, characteristic of the Mexicans in their contemplation of death in any of its phases, is indicated in an inscription upon a grave-marker in Dolores Cemetery,

near the City of Mexico. "Here lies buried, for ten (10) years the body of ——, in hope of a glorious resurrection." His lease was longer than the average. But he had evidently thought that he would be quite forgotten by the end of ten years, and no one would inquire what became of his dust after it was hustled out of its temporary resting place to make room for another lodger.

To be sure, the same thing has been going on in this world of ours ever since it was first used as a burial place, and every part of its land surface is, in all probability, an ancient cemetery. But one does not relish having such considerations brought out so conspicuously and treated in such a matter-



"PUEBLA."

of-fact way, as is done in a Mexican burial place.

There are three terms used in Mexico to denote a burial place;—*Campo Santo*, *Panteon* and *Cemetario*. There seem to be distinctions made in the use of the several terms, but they are too subtle to define without extending my present remarks beyond their proper limits. *Campo Santo* seems to be of more generally rural or provincial use. *Cemetario* appears to be a word of comparatively recent adoption into the language, and its use is confined to a certain class of aristocrats. The term “*Panteon*” is almost exclusively applied in the capital, (and other large towns,) to intramural burial places; and is also used more generally by the class of persons who have detached themselves from established religion. The term is evidently intended, in other words, to imply a pagan idea of death. This is more obvious when we take the *Panteon de San Fernando*, in the City of Mexico, as a type of burial place to which that term can be most properly applied.

This *Panteón* is almost in the heart of the capital, and occupies adjoining patios of the ruined monastery of San Fernando. Perhaps it might be well to say, in passing, that the Church of San Fernando, still in a good state of preservation and in use, has been identified as that into whose tower Grant carried a howitzer and assisted in the capture of the city in 1847. The monastery felt the heavy hand of the “Reform” movement in the middle of this century, which nationalized, confiscated and left in ruins all conventional property.

Yet, curiously enough, the *Panteon* now existing within its cloisters, contains the tombs of those who were most active in this work of destruction. President Comonfort and President Juarez are entombed there, together with many of their political adherents. And still more curiously, this *Panteon* contains the tombs of the two companions of the Emperor Maximilian in his execution. Miramon and Mejia rest within a few steps of the tomb of Benito Juarez, who signed their death warrant. The others who are entombed there are, for the most part, of the Liberal party, the adherents of the political views of Juarez. It may have been in irony that this spot was selected as the burial place of Melchor Ocampo, the great liberal patriot and martyr, (“Sacrificado por la Tirania,” is the inscription on his tomb,) Miguel and Ignacio Lerdo y Tejada, Gen. Zaragoza, two victims of the Imperial decree of 1865, and others, whose presence, living or dead would have been offensive to the church, a quarter of a century

ago. Undoubtedly it was intended to point some stern political lesson to those of future ages.

The tombs in the patio are much crowded, and with one exception are of little artistic merit. The one exception is a notable one. It is the tomb of Juarez, the most admirable example of mortuary sculpture known to me. It well deserves a separate and more extended notice. The patios are surrounded by broad, covered corridors, and the walls of the corridors are filled with mural tombs,—“oven” tombs, as they are called in New Orleans,—in three tiers.

The extra-mural burial places of the capital are numerous. Just outside the Tlaxpana Gate are the adjoining English and American Cemeteries. Neither is deserving of especial remark, save that they conform to the law of neglect which pervades all cemeteries in Mexico. Of the others, Dolores and La Piedad are the most notable examples.



“LA PIEDAD.”

Dolores is the public cemetery of the capital. It reflects, to the thoughtful observer, the religious indifference, amounting almost to paganism, that has grown in Mexico during the present century. Religious symbols are scarce within its gates. Standing at its entrance, and watching the funerals which chase each other in, as though there were some fearful plague in progress in the city, one seldom sees a clergyman accompanying a corpse, for the purpose of committing it to the ground in hope. The poor are brought in great numbers and hurried up the pathway to the place where grave diggers are kept constantly at work opening graves in long straight rows, which are filled in order as dug.

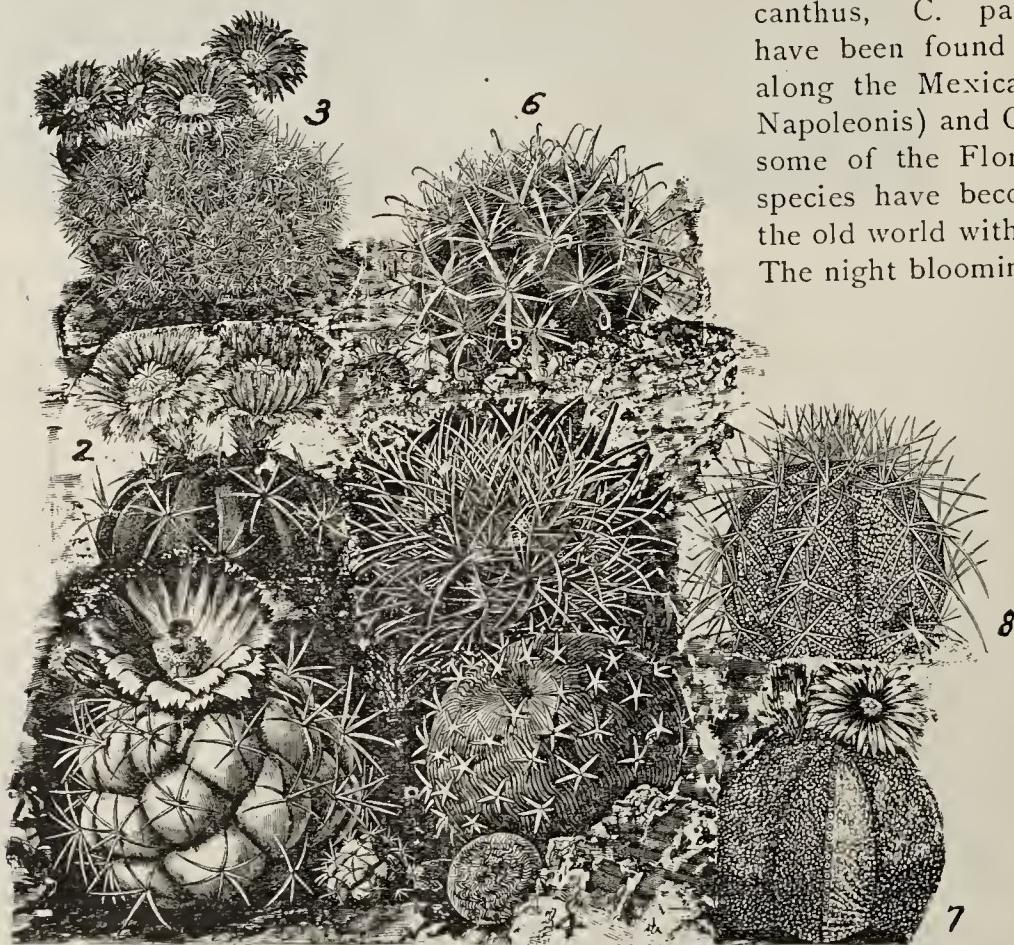
La Piedad is usually known as the French cemetery. It is by far the handsomest cemetery in the Republic, and almost out of the category in which I have placed the cemeteries generally. Probably it was at first the exclusive possession of the French Residents of the capital, but it has been adopted

PARK AND CEMETERY.

by the wealthier Mexicans and more particularly those of the conservative element; that is, those who are still adherents of the Church at Rome. It might still be called the French cemetery however because of the French taste displayed in it. The profuse employment of cast iron ornaments, the bronze letters upon the marble slabs, and the nomenclature throughout, are all French. There is a religious tone felt in this cemetery as in no other in Mexico. A religious sentiment appears upon the gateway. There is a row of graves of sisters of Charity, (now no more seen, living in the City of Mexico,) and here and there, one may find the grave of a priest. The tombs are generally of more artistic design than in any of the other burial places and it is refreshing to see that religious symbols are not wholly tabooed here.

It may be that Mexico, so progressive of late, will, as the years go by, compare the other cemeteries with that of La Piedad, and strive to bring the others up to the standard of this. But at present the Mexican cemetery generally offers but one suggestion to those who are interested in the subject of "How to beautify burial places so that they will furnish wholesome lessons to the living"—and that is, how *not* to do things in preparing a resting place for the dead.

L. Viajero.



- | | |
|--------------------------------|-----------------------------------|
| 1. ECHINOCACTUS POLSEGERIANUS. | 2. ECHINOCACTUS TEXENSIS. |
| 3. ECHINOCACTUS SIMPSONI. | 4. ECHINOCACTUS MULTICOSTATUS. |
| 5. ECHINOCACTUS CYLINDRACEUS. | 6. ECHINOCACTUS WIZLIZENI. |
| 7. ECHINOCACTUS MYRIOSTIGMA. | 8. ECHINOCACTUS ORNATUS MIRBELII. |

GARDEN PLANTS—THEIR GEOGRAPHY, XXIV.

FICOIDALES.

THE ECHINOCACTUS, OPUNTIA AND MESEMBRYANTHEMUM ALLIANCE.

(Continued.)

Echinocactus has 200 or perhaps 250 species, with a number of varieties. They are mostly Mexican, but some thirty-two species and varieties extend to the United States. *E. Simpsoni* and *E. Whippleyi* in variety are found in Colorado. The majority, however, are found along the Mexican boundary in California and Texas, etc. Some species attain to a large size, and many are curious and attractive.

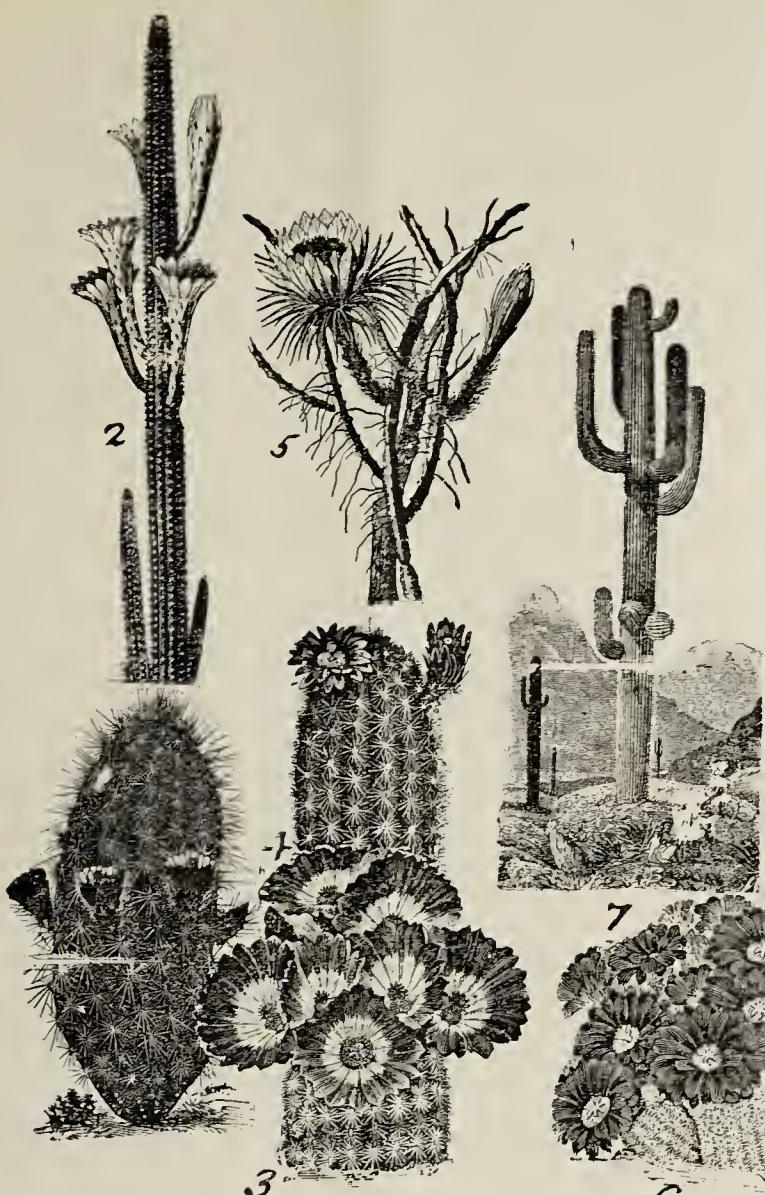
Eriosyce is a monotypic plant from Chili.

Disso-cactus has two or three species in the West Indies and Brazil, one of which has been in cultivation as a phyllocactus.

Cereus is credited with 220 species in tropical and sub-tropical North and South America, the West Indies and the Galapagos Islands. About forty forms are credited to the United States, either natives or naturalized, with twice or thrice as many names, and more being invented. They are very variable in habit, globose, erect, or climbing, and their flowers are often the most gorgeous imaginable. *C. cæspitosus*, *C. gona-canthus*, *C. paucispinus* and *C. aggregatus* have been found in Colorado. Many are found along the Mexican border, *C. triangularis* (not *Napoleonis*) and *C. monoclono*s are naturalized on some of the Florida "keys"—(islands). Several species have become wild in the drier regions of the old world within or bordering upon the tropics. The night blooming species never lose their interest, for there are always great numbers of people to see them for the first time. Many of the smaller species (like some orchids) bloom more freely when but recently imported.

Eulychnia is a monotypic genus from Peru and Chili.

Phyllocactus has thirteen species and several varieties, natives of Mexico, Central and South America. Of late years a few European hybridists have turned their attention to these plants and to *Cereus*, and several handsome night and day blooming varieties have been raised. Such plants as *P. latifrons* are easy rivals of the night blooming *cereus*, quite as handsome in flower and more



1. CEREUS CHLORANTHUS. 2. CEREUS COLUBRINUS. 3. CEREUS CANDICANS—*Hort.*
4. CEREUS VIRIDIFLORUS. 5. CEREUS TRIANGULARIS. 6. CEREUS CESPITOSUS.
7. CEREUS GIGANTEUS.

compact in growth. In the States south of New Jersey several will make their growth planted in the open ground in full sun; in fact, almost any Cactæ would do better so treated than neglected, as they



CEREUS spp.—*Hort. Cal.*
(Published as Phyllocactus spp.?)

usually are, during the growing period. Care must always be taken to have a well drained soil, however.

Epiphyllum has about three species, which vary considerably within somewhat narrow limits. The flowers vary from salmon and orange red to various shades of purple, variously striped and blended with lighter colors. The species are all Brazilian. I think travelers have told me that these plants are often epiphytic, or sub-epiphytic, but whether or no, they can be given the culture of such plants in cultivation. Then they attach themselves to cereus or other cactæ with extraordinary facility. It is simply a question of digging slits in the stock with the point of a knife, and fitting as many little wedges of epiphyllum into them as desired, perhaps securing them with a pin or toothpick, and given the stock big enough, a whole wall may soon be covered by epiphyllums.

Rhipsalis has thirty species in tropical America, with one at least widely diffused in South India, the Pacific Islands and South Africa. *R. cassytha* and some others bear small white fruits, reminding one of some *Loranthus* or mistletoe.

Nopalca has three species in Mexico, the West Indies and tropical South America.

Opuntia, "Indian fig," has anywhere from 100 to 200



PHYLLOCACTUS ALBUS SUPERBISSIMUS.—*Hort.*

species. American botanists credit from 68 to 100 forms to the United States. One or two fairly distinct forms of *O. vulgaris* extend northwards to New England, New York and Michigan. *O. poly-*

acanthus (*Missouriensis*) and *O. fragilis* extend north to British Columbia and other parts of Northwestern America. The remainder are widely diffused in the Southwestern United States and in the



1. *OPUNTIA VULGARIS.*
2. *OPUNTIA EMORYI.*
3. *OPUNTIA MICRODASYS.*
4. *OPUNTIA FRAGILIS.*
5. *OPUNTIA BASILARIS.*

tropical parts of America. *O. amyloëa* is naturalized on Mount Vesuvius and other places in Mediterranean countries. So also is *O. vulgaris*. Indeed, several forms seem to have naturalized so freely that they grow up in the tropical fallow fields of the old world as freely as burdocks. They

are commonly employed as hedge plants, and have every facility to spread themselves when the land is out of cultivation. Many species are, however, quite handsome in form and color, and where gardening is in vogue in climates adapted to them they may often be formed into very fetching and picturesque groups. The fruit of several is edible, which is about the only resemblance they bear to figs. The genus was founded by Tournefort and changed to cactus by Linnaeus.

Trenton, N. J.

James MacPherson.

COMMERCIAL TREES.

Mr. J. O. Barrett, Secretary of the Minnesota State Forestry Association, in discussing tree culture from a business standpoint, says:

"By experimentation the early settlers learned that only non-commercial trees could be successfully raised on the open prairie. It may never be safe to reject these pioneers entirely as shelter belts for the commercial

sorts which are less hardy in the start. With their protection, prairie forestry is sufficiently developed now to warrant the introduction of the pines, white and red oaks, canoe white birch, walnuts, hickories, hard maples, basswoods, rock elms, the better ashes and some others. It has already been demonstrated in the southern half of the state, that walnut orcharding is a paying success.

In Europe are plantations of commercial trees that largely support the government. The little country of Bavaria, for instance, owning 3,000,000 acres of forests, receives from them a net profit annually of \$4,500,000. Minnesota, or any other state of equal area, can do as well, only practically systematize the enterprise. In Massachusetts, and like success in other New England states, an eight acre lot of poor land, sown to pine seeds in 1850, the trees cut in 1891, yielded \$2,000 from the box boards at the mill.

"At this rate 100,000 acres, conditions similar, would, in 40 years growth of the seedlings, yield \$25,000,000; and 10,000 square miles, 6,400,000 acres, poorest land, located at the headlands of our principal streams, as forest reserves, would yield \$1,600,000,000, to say nothing of water economy and healthful influences, and benefits to the general agriculture. According to good authorities, the increment value of wood growth after the trees have developed to about half their maturity, is five cents per tree. Dating these ratios, and allowing each acre to have, average, only 100 trees, the increase in value per year of the 10,000 square miles would be \$31,000,000.

"Calling the net but half this sum, it is obvious that, with right management, the profit from the cut would liberally support all our state public institutions. Is it not worth the while, then, for the state to encourage the raising of pines and other commercial trees on lands useless for other purposes than such tree culture?

"Let the prairie farmers, too, consider their chances. The demand for timber is constantly increasing. If they would begin the commercial enterprise with simply one acre, and every year plant a new one, so that the value would be continuous after the first cutting by selection and keeping the forest intact, the income would far exceed the profit of all their other crops."



EPIPHYLLUM TRUNCATUM.



PARK NOTES.

The reports from the district schools of the state of Indiana show that the school children on Arbor Day, October 29, chose the maple as the state tree. About 20,000 trees were planted by the children of the state.

* * *

Rapid progress is being made in the improvement of the vast park reservations of Boston and vicinity. Superintendent Pettigrew has some 800 men in his employ, and thoroughness and permanence seem to be the ruling ideas in the prosecution of the work.

* * *

One of the finest Chrysanthemum shows of the season was that given at Schenley Park, Pittsburgh, the latter end of October. Over 200 varieties were shown, over twenty of which were entirely new. Mr. Falconer, the well-known superintendent, is evidently intent on creating a strong interest in flowers and their culture in his locality.

* * *

The Park Commissioners of Rochester, N. Y., in whom was vested the authority to plant shade trees on the streets, have recently begun to exercise that power, although some property holders are to be heard in protest. It was decided to plant West avenue with elms and poplars, principally elms, the latter to be planted fifty feet apart. The cost is estimated at \$435 to be assessed on abutting property owners. Hence the protest.

* * *

The United Singers of Brooklyn, N. Y., for a second time within three years, secured the prize at the great Saengerfest at Philadelphia, which on the last occasion was a bust of Mozart. They resolved to donate it to Prospect Park, and money was soon raised for a pedestal. The occasion of its unveiling was made a gala affair, and the flower garden of that beautiful park is further enriched by the bronze presentation of the great composer.

* * *

The park officials in our larger cities are realizing the propriety of providing for winter sports in our parks. The parks are becoming such popular resorts for "all sorts and conditions of men" in the pleasant seasons of the year, that to such as then enjoy their health giving recreation, it seems a deprivation to cut off their winter opportunities for lack of small conveniences. Winter pleasures have been provided for in the parks in a certain sense in many localities, but not to the degree really warranted. However, among others, the commissioners of the Chicago parks are preparing to provide warm shelter houses for the skaters this season, and are otherwise contemplating making ample arrangements for winter recreations.

* * *

An excellent suggestion is conveyed by the tower in Flynt Park, Monson, Mass., from which the lovely scenery of the surrounding country of the Berkshire Hill, is always an attraction. Flynt park is an elevation at no very great distance from the village of Monson, and on the very summit there has been erected by the Flynts—by whom the park was given and for whom the park was named—a massive tower from which may be viewed the surrounding country for miles up and down the valley. The park is one of the favorite breathing spots of that vicinity and is visited by tourists coming from considerable distances. There are many such opportunities at various points of the country to improve the natural advantages and increase at small expense the attractiveness of the surroundings.

* * *

A Tree-Planting Association has been organized at Staple-

ton, Staten Island, N. Y., under the name of the Staten Island Tree-Planting and Protective Association. In discussing the work of the Association Vice-president Holick said that the trees now planted were being destroyed by the companies erecting wires for various purposes, and no more glaring example was needed than between New Brighton and Snug Harbor, where trees were completely destroyed. It ought to be a function of the body to protest vigorously against such destruction and to educate the public mind to the value of the trees. The general plan suggested was that five town committees be appointed, each to have a chairman, to be a member of the executive board. The town committees would have their own organization and sub-committees.

* * *

The Arbor Committee of the Teacher's Institute, York, Pa., have made a report in which the following occurs: Whereas, All concur in the necessity of taking steps toward the preservation and extension of our forest lands. Therefore, be it Resolved, That inasmuch as the executive department of the Commonwealth of Pennsylvania, appoints and sets aside two days in each year to be observed as Arbor Day, the teachers increase efforts to properly observe them and do something either in having appropriate exercises or in planting trees, or both. That teachers plant or cause to have planted such trees as may serve as subjects for object lessons; thereby to inculcate into the minds of pupils a proper degree of discretion in the preservation of the beautiful and the useful parts of the forests and the consumption of the undesirable. That we heartily endorse the passage of additional laws for the protection and extension of our forest lands.

* * *

The Academy of Sciences of Southern California has suggested to the park commissioners of Los Angeles that the parks of the city be dedicated, in so much as may be necessary, for the establishment of an arboretum designed to be the most complete in the temperate zone; and that the work be begun with the forest flora of California. The Los Angeles *Herald* in discussing the proposition says: The plan commends itself at once to every intelligent mind, and when it is considered that Los Angeles has in its park system, and in the soil and climate of Southern California, the finest imaginable facilities for carrying it to perfection, the only wonder is that it has never been thought of before. The vast extent of the city park system and the different conditions presented as to cultivation affords the widest range for experiment, and for giving the different specimens a home amid their natural surroundings.

* * *

Considerable discussion has arisen on the treatment of Copley Square, Boston, upon which abut Trinity Church and the new Library building. Mr. John Lyman Faxon, writing to the *Transcript* advocates: 1st, the laying out of the square as a square. 2nd, No grass plots 3rd, No fountain. 4th, A checkered pavement of colored stones. 5th, Architectural columns for electric lights. A fountain has been among one of the decorative propositions, but this Mr. Faxon also opposes. On this point he says: "If a fountain is to be placed in the square, it ought, it seems to me, to take on the shape and approximate size of Niccolò Pisano's Fonte Maggiore in the piazza of Perugia (omitting the two upper basins). The basin to be low and broad, rising upon a platform of three low steps, and the curb panels sculptured with reliefs, illustrating the history of the city, and emphasizing the qualities of high and noble citizenship." "Few of the squares in the world are surrounded by such an aggregation of warring architectural elements, not only having little or no sympathy with each other, but actually 'swearing at each other,' and when the gigantic apartment hotel is erected, it will do more swearing than all its neighbors combined." He suggests the Piazza of San Marco, Venice, for a study of the subject.

PARK AND CEMETERY.

CEMETERY NOTES.

A Burial Plot Perpetual Care Corporation has been promoted in Brooklyn to deal in cemetery and park supplies and to act as agents in matters concerning the care of cemetery plots, etc.

* * *

The mayor of Knoxville, Tenn., is exercising himself in favor of the chrysanthemum. He is endeavoring to establish the custom of annually decorating cemetery lots and graves with this favorite flower in November.

* * *

The old North Cemetery, parish of North Truro, Mass., has been remembered in the will of the late A. E. Hughes of Somerville. The interest of a sum of money is to be devoted to the work of keeping the cemetery in good condition.

* * *

California, notwithstanding its beautiful climate, has hitherto had a poor reputation for the care of its smaller cemeteries. The press is now, however, making an active campaign looking to the improvement of local burial grounds, and if there is a place in the world that should have beautiful and well-cared-for cemeteries, it is California.

* * *

A cemetery episode: The trustees of Odd Fellows' Cemetery at Smyrna, Del., decided to arrest Nathaniel Carey on the charge of vandalism. He is the man who removed the tombstone from his wife's grave and threw it in the road. His objections were that the stone had been erected by his mother-in-law. He holds sacred the memory of his first wife.

* * *

An exchange says work on the new cemetery, Ridgelawn, at Elyria, O., is progressing, and "it is the intention to have it ready for opening early next season. It is to be on the lawn plan, free from grave mounds, so that it can be neatly mown. The by-laws of the association provide for a certain portion from the sale of lots to be set aside for perpetual care of the grounds. This will insure the patrons that in the future proper care of the graves will be fully maintained."

* * *

The result of the action for damages, before the Supreme Court of New York State, for injury from poison ivy in a cemetery has awakened considerable activity among cemetery corporations on the subject. A little thought on any such question ought to suggest the right course to pursue. Contributory negligence has a very broad significance, and in the event of injury to the person is as far reaching in a cemetery in relation to poison ivy as it is in other questions elsewhere.

* * *

Graceland Cemetery, Washington, D. C., will soon be a thing of the past. The work of removing the remains of bodies buried there is being rapidly pushed, and it is expected that the few remaining graves will soon be opened, the coffins taken away, and the last semblance of the graveyard removed. By January 1 the land will be ready for sale. In the spring of 1895 Congress enacted a law providing for its abandonment, the reason being that it would interfere with the growth of the city in that direction.

* * *

The first interment in the Forest Park Cemetery, Troy, N. Y., was made last month. Thirty-five acres on the south end have been laid out, and a force of men is still at work. The plats of the cemetery will be named after the counties of New

York State, and the entire grounds will be included under the names of the sixty counties. Those plats having the highest elevation will be designated by the names of Adirondack and Catskill Counties, others as Franklin and St. Lawrence. The plat in which single interments will be made will be called King's plat.

* * *

It is gratifying to record the following instances of the improvement of our cemeteries by useful memorials: The Oak Hill Cemetery Association of Pownal, Vt., is the recipient of an imposing gateway by Solomon Wright in memory of his wife, who died some time ago in Egypt. The gate posts are of rock-faced granite, fourteen feet high, to be connected by an arched iron gate.—By the will of the late Mrs. W. S. Wilcox a sum of \$5,000 is bequeathed to the Oakwood Cemetery trustees, Adrian, Mich., for the erection of stone memorial gates at the entrance to the cemetery.

* * *

The Allyn memorial at Spring Grove Cemetery, Hartford, Conn., of which mention has often been made, has been renovated throughout, extensive repairs having been carried out, both on the inside and outside walls. The decorations, frescoes and terra cotta work on the inside have been restored, so that the walls are now as beautiful as they were originally. The outside appearance of the memorial is as attractive as it ever was. The building will be maintained at a comfortable temperature through the winter season by steam heat, which is carried from the new office. The latter structure is well equipped for its object.

* * *

The following decision was recently handed down by the civil court at Franklin, Pa.: "In the matter of the petition of the citizens of Franklin for the removal of the remains of persons buried in the Second Ward Cemetery, the prayer of the petitioners was refused. The court held that the Act of Assembly governing such cases contemplates a proceeding against a burial ground belonging to one religious society or church, or a ground heretofore used as such, and now in charge of no person or persons, church or society; and where two or more lots, although contiguous, are used independently of each other, separate inquiry must be made as to each before an order can properly be made directing the removal of the remains therefrom. The inquiry in this case was general, and the proceeding against the whole group of lots." The cemetery referred to is in the city, and the plaintiffs wanted to compel the city authorities to make the removals, they claiming to have title to the grounds by reason of the lots not being paid for.

* * *

The following communication in the *Gardener's Chronicle*, England, speaks volumes in favor of the American Modern Cemetery: A public body advertised in the *Gardener's Chronicle* for candidates for the appointment of cemetery superintendent. I made an application for a form and summary of the duties required. These are as nearly as possible as follows: Gardener, caretaker, cashier, accountant, supervisor of headstones; to clean and heat all chapels; to disinfect and clean mortuary, and receive all bodies; to attend all funerals, and act as sexton; to receive certificates, and attach the same to weekly returns; to attend upon the officiating clergymen for the purpose of filling up and signing a book giving all the particulars of a funeral; to attend at coroner's inquests, also at all committee meetings; and the supervision of grave-digging, and the ground generally; and this all for the munificent sum of \$400 yearly. If the salary had been \$1,000 instead the requirements could not have been more onerous, and it shows unmistakably what a lamentable pass public gardening appointments have come to.

The annual meeting of Oakland Cemetery, St. Paul, Minn., was held November 29. The president reported receipts from all sources for the year, including a previous balance of \$629.54, to be \$28,296.18. The sales of lots and single graves amounted to \$11,198, and the greenhouse returned \$3,842.37. The investments of the funds of the association amount to \$90.700. The aggregate expenditures for the year were \$25,355.90, leaving a balance of \$2,940.28. A comparison of the reports of the past three years shows a steady increase in receipts. Among the items of receipts were: Interment fees, \$1,588; tomb fees, \$496; miscellaneous labor and foundations, \$993.60. In expenditures the pay rolls consumed \$11,873.80; general improvements, \$275.37; greenhouse, \$1,081.12. The assets of the association as per secretary's report amount to \$240,120.04, and liabilities \$92,856.19. The superintendent's report shows ninety-four foundations built and twenty-one monuments and seventy-three markers erected, besides considerable improvement and planting work. The average number of employes per month was twenty-one. Interments during the year were 293, making a total in the cemetery to October 31, 1897, of 12,923. Sales included fifty-three lots and eighty seven single graves. More than 96,000 plants were grown in the greenhouses, 27,000 of which were used in the chapel and on the lawns, and over 50,000 were sold to lot-owners and used in 476 vases and 388 beds. Considerable improvement is awaiting better times, the income not warranting, in the opinion of the trustees, an expenditure adequate to the desired work.

Penn Common, or park, at Reading, Pa., one of the beautiful parks of the state has had an interesting history. It was the gift of William Penn to the city as a common forever and ever. But this fact was long lost sight of, and the authorities of the borough permitted its sale to the commissioners of Berks county, and the county thereafter claimed to own it. One hundred years ago the common was used as a place of public execution, with the descriptive and impressive title of Gallows Hill. About fifty years ago the county built on the common the stone prison, looking like an old Norman castle. They also used it as a parade ground, and later the Agricultural Society took it for exhibition and racing purposes, the place being dotted over with large and small buildings and cattle sheds, and all enclosed by a shabby fence. As recently as fifty years ago it was used by the housewives of the city as a washing ground. On Monday and Tuesday mornings the "spring" would be surrounded by dozens of busy workers. The washing was done there in company, as it is to day in foreign cities, the grass serving as a public bleaching and drying place. Finally the citizens awoke to the fact that the entire place, numbering fifty acres, belonged to them. The proper legal steps were taken, and Penn Common now at last serves its donor's intention.

* * *

Mr. Harlow N. Higinbotham of Chicago, so well known in connection with the World's Fair, who owns a beautiful country residence two miles east of Joliet, Ill., has decided to develop it for a park. Work was recently commenced to transform a 400-acre tract of woods and prairie land. Work will be pushed as fast as possible, and the place will be beautiful with dams and rustic bridges. In the spring it is proposed to stock the park with quail and deer.

* * *

The new conservatory in Washington Park, Chicago, which was opened to the public a few weeks ago, with an attractive display of plants, the principal feature being a goodly array of fine chrysanthemums, is constructed of steel and glass on a stone foundation, and is one of the largest of its kind. It has been constructed and furnished on the latest practice in such work, and

surmounting a terrace as it does, it forms a conspicuous object in the park's development. It is located a few rods from Cottage Grove Avenue which it parallels, just north of the old greenhouses, and is 420 feet long by some 55 feet in general width. A central and two end domes, 50 feet in height, break up its length, and in these domes are quartered the permanent tropical, subtropical and other rare and tall trees and plants, while the curtains, or connecting ways between them will contain the flowering plants which each season permits and which afford attractive features in conservatory work. The improvements in connection with the terrace upon which the building is erected, are not yet complete, but this, in connection with the lily ponds, the additional plant of eight greenhouses and the office and other buildings, will afford ample opportunity to Mr. E. A. Kanst, the chief gardener, for gardening and landscape effects. The building is heated by steam which is conveyed from the power house 700 feet away to the south. The building itself, apart from the grading and terrace work, has cost \$33,000; it was designed by Mr. D. H. Burnham.

CORRESPONDENCE.

The publisher is not responsible for views expressed by correspondents, but no communications will be noticed having a personal nature or malicious intent. Communications must always be signed, not necessarily for publication but as an evidence of good faith.

The Omaha Convention of the A. A. C. S.

OMAHA, NEB., November 29, 1897.

Editor Park and Cemetery,

DEAR SIR: The executive committee of the American Association of Cemetery Superintendents for the convention of 1898 to be held in Omaha, Neb., appreciates very highly your suggestions in reference to our convention being held at the same time as that of the National Convention of Undertakers in our city next year. There are many reasons why these two conventions should meet in joint session part of the time. At least for the mutual benefit of both, as we come into business relations with each other every day in the year. Moreover, to be able to effect a joint excursion to the Yellow Stone National Park would be the event of a lifetime for many of us.

The committees of both conventions have had a meeting with this in view, but before taking any action in the matter I desire to have such suggestions from PARK AND CEMETERY and any members of the association as they may be pleased to offer. It will, of course, be necessary to ascertain before anything definite is done as to what number would be likely to join the excursion.

I would suggest that the excursion start from Omaha, because our convention requires three days to finish up its business, and after the business is over we cannot afford to be hurried away before having an opportunity to visit the great exposition in progress at that time, which would take at least two days.

The manner in which the management of the exposition is advancing the work on all the principal buildings, the demands for space coming from all over the United States and Canada, as well as the South American and European countries and Russia, China and Japan, leaves no doubt in our minds as to the magnitude of this great undertaking. As an educational feature this exposition will be second to none ever held in this country in many respects.

I am negotiating with the railroad companies in regard to a special train, and will report as to time and expense of this excursion later.

J. Y. Craig.

Association of American Cemetery Superintendents.

G. W. CREEZY, "Harmony Grove," Salem, Mass., President.
ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., Vice-President.
F. EURICH, Woodlawn, Toledo, O., Secretary and Treasurer.

Publishers' Department

Park Commissioners and Cemetery trustees are requested to send us copies of their reports.

RECEIVED.

Cascade Park, New Castle, Pennsylvania. A profusely and handsomely illustrated descriptive pamphlet of this recently developed park, the property of the New Castle Traction Co.

Maple Grove cemetery, New York. Rules, Regulations, etc. Illustrated. With sheet of photogravure views of entrance, etc.

The Park and Out-of-Door Art Association.

The Park and Out-of-Door Art Association, has just sent out by its secretary, Mr. Warren H. Manning, Boston, Mass., a circular of which the following forms part:

The Association was organized at a convention of Park Commissioners and others interested in the development and design of public parks, in the improvement of villages and home grounds, and in the preservation of natural scenery, which was held at Louisville, Ky., May 20 21 and 22, 1897. Mr. Charles Eliot suggested shortly before his death that "a general association, to be made up of all who desire the advancement of art out-of-doors, including amateurs, land owners, writers, park commissioners and officers, village improvement societies, foresters, gardeners and others interested." An organization corresponding somewhat to the American Association for the Advancement of Science," and it was on these lines that the association was formed. Papers of much interest were read, and the enthusiasm manifested by all present was very encouraging. The next meeting of the Association will be held at Minneapolis, Minn., June 23, 1898, when the Constitution and By-Laws will be submitted for approval and an interesting programme will be presented. The Publication Committee is now preparing to print the papers read, together with the proceedings of the Convention, a copy of which will be sent to each member. The membership fee is two dollars, payable annually in advance. All interested in the objects of this Association, are earnestly invited to become members and contribute to its success.

The Maine Agricultural Experiment Station is now sending out the second of the bulletins (Bulletin No. 38,) on the Inspection of Fertilizers for 1897. The bulletin issued in March contained the analyses of the samples received from the manufacturers. The present bulletin contains the analyses of the samples collected in the open market by the inspector. The table comparing the percentages guaranteed by the manufacturers with the results

of the manufacturer's samples and those collected by the inspector in different parts of the State, contain the figures of the greatest interest to manufacturers as well as consumers. "From these comparisons it is gratifying to note that, as a rule, the fertilizers are well up to the minimum guarantee. The comparisons indicate that the manufacturers, for the most part, do not intend to do much more than make good the minimum guarantee and this is all that the purchaser can safely expect." This bulletin will be sent to all who apply to the Agricultural Experiment Station, Orono, Me.

FAMILIAR FEATURES OF THE ROAD-SIDE.—The Flowers, Shrubs, Birds and Insects. By F. Schuyler Mathews. Author of "Familiar Flowers of Field and Garden," "Familiar Trees and their Leaves," "The Beautiful Flower Garden," etc. New York. D. Appleton & Company. Price \$1.75.

To anyone with the slightest inclination to become better acquainted with some of the wondrous works and beauties of Nature, an acquaintance so attractive that our greatest minds have revelled in it, and from which may be drawn inspiration and energy for the better enjoyment of life and appreciation of its obligations, Mr. Schuyler Mathews' books are an incentive. There is a simplicity and an attractiveness in his style, that leads one to join him in his wanderings and examinations of what might be familiar things to most of us, if we devoted a little more time to think and search for ourselves.

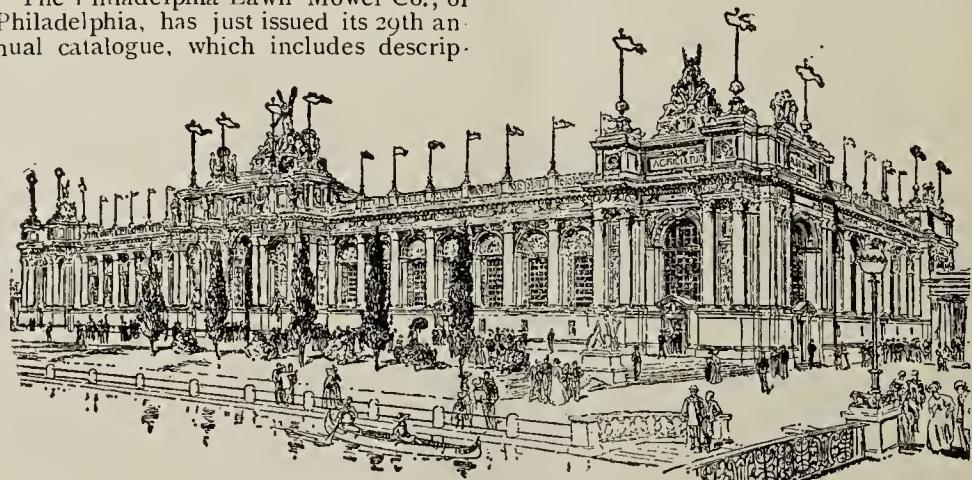
Familiar features by the roadside in a popular and readable way gives a large amount of information on the plant, bird, and insect life to be seen in our wanderings by the way side, and it is illustrated by 160 drawings and sketches by the author, a large number being half tone plates of scenery. Mr. Mathews has also given particular attention to the voices of the insects and other creatures as well as the songs of the birds, which are set to music. The descriptions embrace the period from the earliest spring flowers to those of autumn and the turn of the leaf and frost. The book is an excellent introduction to a field of nature's work wherein all take more or less pleasure, and in these days of growing intelligence on the great subject of art out-of-doors in relation to our homes, it is a book which will increase enthusiasm and a deeper love for mother nature.

The Philadelphia Lawn Mower Co., of Philadelphia, has just issued its 29th annual catalogue, which includes descrip-

tions, illustrations and prices of thirteen distinct styles of Hand and four Horse and Pony Mowers. The Philadelphia Lawn Mower has thoroughly established itself for simplicity and durability, which means service with freedom from repairs, and the large increasing output of the company confirms the assurance that it gives entire satisfaction. A useful addition to the catalogue is the illustrated descriptive price list of extra parts, from this any part can be readily distinguished and secured. These catalogues, may be readily obtained by addressing the company.

The Agriculture Building, Omaha, Neb.

The illustration herewith shows the Agriculture Building, now in course of completion for the Trans-Mississippi and International Exposition to be held in Omaha, Neb., from June to November, 1898. The design of this building shows a richness of ornament almost to redundancy, which not only gives it the character of an exposition building but suggests the wealth and abundance derived from agriculture. While the building is of Renaissance or classic type the decorations and ornament will be entirely modeled from agricultural products—festoons of corn and other cereals, and even the common market garden products are given proper place in this decoration. The great semi-circular niche forming the main entrance will be richly decorated in this way in color, and on either side of it there will be figures representing the "Digger" and the "Sower," taken from Millet's famous paintings, supported on either side by lesser figures and the arms of the state and nation. At each side of the great central arch will be recessed niches with rich color decoration, and crowning this central composition will be three sculptured groups, those on either side representing the zodiac and the seasons, while the central figure, crowning the whole composition, will represent "Prosperity," supported by "Labor" and "Integrity." At the corner pavilions there will be figures representing the seasons and the favorable winds, and inscriptions relating to the subject of agriculture. Names of those who have been patrons of agriculture or who have made notable inventions in this field of labor will be inscribed upon the panels in the frieze. The outside dimensions of this building are 148 by 400. It has a total floor space of 84,260 square feet. The design is the creation of Mr. Cass Gilbert, Architect, St. Paul, Minn.



AGRICULTURAL BUILDING, OMAHA, NEB.

PARK AND CEMETERY.

Devoted to Art Out-of-Doors,—Parks, Cemeteries, Town and Village Improvements.

R. J. HAIGHT, Publisher,
334 Dearborn Street, CHICAGO.

R. J. HAIGHT,
JOHN W. WESTON, C. E.,
Editors.

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CONTENTS.

EDITORIAL—SUNDAY FUNERALS—AN ECCENTRIC LOT-OWNER	
—THE CONTROL OF PUBLIC MEMORIALS.....	243
RESIDENCE STREETS, V.....	244
*EVERGREENS FOR DOOR-YARDS AND WALLS.....	245
*THE CLAY MONUMENT, LEXINGTON, KY.....	247
*THE PARKS OF OMAHA, NEB.	248
*FERNCLIFF CEMETERY, SPRINGFIELD, O.....	250
GRAVES OF THE WINNEBAGO INDIANS.....	251
*SOME RECENT MEMORIAL FOUNTAINS.....	252
*NATIONAL CEMETERY, ANTIETAM, MD	253
*GARDEN PLANTS—THEIR GEOGRAPHY, XXV.....	254
*COLONEL WOOLDRIDGE AND HIS GRAVEYARD.....	255
*RECEIVING VAULT, NEW BEDFORD, MASS.....	256
*THE PETERHOF PALACE, RUSSIA.....	256
LEGAL.....	258
PARK NOTES.....	259
CEMETERY NOTES.....	260
CORRESPONDENCE.....	261
PUBLISHERS' DEPARTMENT.....	262

*Illustrated.

THE course of events is rapidly determining that the Sunday funeral, except in dire necessity, shall be a thing of the past. The necessity of maintaining a working force at the cemetery on the Sabbath day, the increased responsibility resting upon the acting officials, and the additional labor involved, owing to the large number of visitors, in fact more exacting duties all round, are among the reasons for a change on the part of the cemetery. Thoughtless strangers intruding upon the privacy of the funeral, the damage and destruction on adjoining lots; in a word the impracticability of restraining the curious many from outraging the exclusiveness of the bereaved few at the Sunday funeral, has been leading to a sentiment in general against carrying out funeral ceremonies on that day. And it is gratifying to note that the Catholic clergy in the larger cities are joining in active sympathy in the movement, and have made rigid regu-

lations to confine the practice to the limits of necessity. The benefits which this altered condition will confer on the cemeteries, should be considered in revised rules and regulations governing them, so as to afford all possible relief in such cases, which will be many, where serious inconvenience and expense may be imposed upon patrons by this radical but beneficial change in funeral customs.

A STRIKING example of misplaced and eccentric memorial effort is illustrated on another page. It is amusing only in its eccentricity, for it is well nigh impossible to conceive of a human mind, in this latter end of the nineteenth century, devoting time and money to caricaturing his departed human and animal friends in so lavish a fashion. The term caricaturing is used advisedly, for a perusal of the article in question will disclose that the lot contains no portrait statuary, even of so crude a production, but simply images to memorialize those who have gone before. To use the matter as the text for a short dissertation on the preferable beauties of the lawn plan, might in this case defeat itself, for it has become one of the "lions" of the place, and there is no knowing what might be the future intentions of the owner regarding its perpetuity, nor the general opinion as to its value in the development of the town. But the amusing features will, it is safe to say very soon disappear, and will give way to rational feelings; such a display will then soon become an eyesore, and the cemetery containing it dishonored. And why? Because while in the mind of the owner, the group impersonates beings whom he had known, it does not in the least memorialize character, virtues, or any of the higher attributes of man or beast, nor even was it ever intended to represent them either in form or feature, and there will be nothing to recommend it to the future except the history of the personal eccentricity which conceived the project. Cemeteries have long been recognized as places wherein to perpetuate individual peculiarities, but thanks to the progressive ideas prevailing, cemetery officials are being accorded the right to regulate both the character and number of memorials erected on the grounds.

THIS journal has from time to time urged, not only the advisability, but the necessity, of submitting designs for public memorials to an Art Commission, or to some properly qualified committee, who shall pass upon said designs, and designate the most meritorious and appropriate for the purpose intended. To the same end THE MONUMENTAL NEWS, of Chicago, formulated a suggestion to the Central Art Association, Chicago, embodying this idea so often urged, and at the last meeting of that body formal action was taken in favor of the suggestion. It may now be definitely stated that the Central Art Association will receive and pass upon designs entered for competition for public monuments, free of cost to those in charge, except that the expenses incident to sending the designs to and from Chicago must be defrayed by those requesting the action of the association. Herein lies an opportunity to secure better monuments for public memorials, and the certainty that our dead soldiers will be assured artistic consideration in the structures erected to their memory. It is quite time that common sense had an innings in the matter of such monuments, which, had it prevailed long ago, much of the ridicule, very justly attaching to so many, would have been uncalled for. The idea that only those having particular interest in the object for which a monument is erected, should decide on a design, whether they be old soldiers, old citizens, corporals or generals, is positively absurd, unless duly and properly qualified by education or calling. And this idea has been so ardently advocated and so tamely submitted to, that, as we said before, much of the work of to-day will either be modified or destroyed before many generations have passed away. Let the soldiers' committees, or those interested in reverencing the dead soldier, ceaselessly endeavor to promote the acceptance of these suggestions, to the end that our public monuments may be able, not only to defy ridicule, but to compel admiration.

IN connection with the foregoing, the January issue of *Arts for America* will contain an article on the "Grand Army and Its Legacies," discussing these pertinent questions concerning soldiers' and sailors' monuments. It will set forth the obligations of those in authority in that organization to use care and discretion in the selection of their memorials. It will emphasize the very important consideration, underlying all descriptions of monumental work for public places, that future generations, having no associations in sentiment with the past, will judge our monuments from the artistic side. In view of the probability of the erection of many more soldiers' memorials, how very forcible do these considerations become, and how absolutely foolish it is

to continue on lines detrimental to the patriot soldier's future in respect to monuments in his memory.

RESIDENCE STREETS.—V.

MATERIALS AND CONSTRUCTION, *Continued.*

GUTTERS.

In appearance, a residence street is most satisfactory when the surface of the roadway is uniform from one edge to the other. If a gutter is used at all, it should conform as nearly as possible in both color and grade with the adjacent road. Cobblestone gutters, which have been used quite extensively, are disagreeable to ride on and really narrow the roadway in appearance and in actual use. They are, moreover, hard to take care of unless the stones are small and the joints filled in with cement. In many cases a depression in the sod will be all that is needed to carry away water. With brick, wooden, and asphaltum pavements, and macadam roadways where the grade is not steep and the water has not more than three hundred feet to run to reach a catchbasin, no gutter will be needed. Where macadam is used, and the grade is so steep that abundant rains would cause washing at the edge, a gutter may be useful and, I think, should be constructed of concrete, laid in a strip at the edge of the roadway, having a plane or very slightly concave surface of the same color and occupying the same position of the surface of the macadam which it replaces. In the construction of this gutter, proper precaution should be taken to prevent its destruction by frost, and its thickness should be sufficient to bear the usual traffic. With such an arrangement, and catchbasins placed in the grass plat, the greatest economy is attained since the effective roadway is of uniform width.

CROSSINGS.

In riding along a street, either in a carriage or on a bicycle, nothing is more disagreeable than bumping over the stone crossings that are sometimes used. A roadway should be constructed, both as to grade and surface, so that it will be suitable for pedestrians to cross at all times, especially near street intersections. A crossing of stone blocks generally indicates a bad road, or at least an expectation on the part of those who put in the crossings that the road will be bad.

MANHOLE COVERS

make another disagreeable feature in many roadways. Being made of iron and placed on masonry foundations extending below any filling or disturbed portion of the subgrade, they do not wear away or settle as the adjacent pavement is apt to do

Care in construction and giving sufficient length of time, or allowance for settlement, will reduce this evil, but not entirely overcome it. It would be unfair to the property owners to place the sewer on one side of the street, since such an arrangement would allow deeper basements, or cellars, on one side of the street than on the other. Where sufficient fall for the sewers can be easily obtained, it may sometimes be advisable to lay two lines of sewer pipe, one on each side of the street. In some cases where alleys exist, sewers can be placed in them and thus leave the roadways entirely free and unobstructed. Each case should receive special study so as to reduce obnoxious features to a minimum in the most practical and inexpensive way.

In an ideal street all underground work, including sewer, water, and gas pipes, with connections to each lot, and also, let us hope, all conduits for electric or other wires, will be laid before the pavement is constructed.

O. C. Simonds.

EVERGREENS FOR DOOR-YARDS AND WALLS.

There are several evergreens tender at northern points—say from Richmond, Va., to the City of New York—which, if given the protection of walls, will flower and mature their seeds, especially in the cities. If they were used more frequently it is not too much to say that the whole aspect of the residence streets would be vastly improved and made more cheerful during winter. It is not always necessary to fasten them to the walls; several may be planted in groups at their feet, and enjoy enough shelter. Thus the *Magnolia grandiflora* will be sufficiently protected in many places if planted two or three feet away from a building, and will make a good trunk and assume a rich contour, often of real advantage to the architecture. North of Baltimore, however, it is better close to the walls.



MAGNOLIA GRANDIFLORA.



EUONYMUS JAPONICUS.

Magnolia glauca is evergreen at the south, and in some winters retains its foliage for a long time in southern New Jersey, providing it is sufficiently sheltered. *Berberis Nepalensis* (or as nurserymen sell it, *B. japonica*), is a handsome large-leaved kind, somewhat more tender than the native *B. aquifolium* and *B. repens*. The hybrid *B. stenophylla* is often spoken of in catalogues as though it were hardy; it should be tried under the friendly shelter of walls. There are often dry places under south walls, which have rubbly and poor soil, and such a place is well adapted to *Cistus laurifolius*. *Hypericum calycinum* will remain evergreen in shelter, and will spread nicely. *H. moserianum* should also be tried in various aspects. *Ruta graveolens* will keep its leaves and give a variety of foliage color in the wall border. The *Skimmias* are small shrubs with red berries, quite hardy, but rarely seen. The Hollies cannot be much used north of Washington, except the native *I. opaca* and *I. glabra*. *I. crenata* and its varieties are worth trying, however, and one of the English Hollies, *I. Aquifolium* var. *laurifolia* has done well under a wall at Philadelphia; in fact, one of its varieties lived for years north of New York City. *I. Cassine*, *I. Dahoon* and *I. integra* should also be tried under walls in the upper south. *Euonymus Japonicus* is an excellent wall plant as far north as Trenton,

N. J., and produced fruit at that point during 1896—for the first time within my knowledge. It will be noticed in the photograph that the berries are smaller than in the deciduous kind, and that for the most part but one has matured in a capsule, the other being abortive. Another thing that is noticed about these euonymus is that they never retain their variegation, but revert to the green type. It must be said, however, that the best forms have not been tried, but only two out of nine or ten.

Euonymus radicans in all its varieties is a capital wall plant of smaller growth, clinging to stone work, etc., like ivy when once well started. The finest examples are on the stone gateposts at Mr. Hunnewell's, Wellesley, Mass.

Rhamnus alaternus and its varieties is something I have not met with in America, but it seems as though they ought to stand as far north as Baltimore and St. Louis, if protected by walls as suggested.

Cytisus scoparius is naturalized in quantity on the Reading Railway embankment about twenty miles north of Philadelphia. Both it and its varieties, *Andreanus*, *sulphureus*, etc., are worth planting, for they keep green all winter and flower full in early June. I have but little faith in the laurels of the broad-leaved type, for I remember their be-

made use of here, although they are sometimes starved in nursery rows.

I will end this paper with the Ivies. They do splendidly south, and well on walls to Yonkers, N. Y. There are a great many handsome kinds, but little used, and they may be had in gold and silver variegated forms, with large and small foliage, and in bush form.

J. MacP.

The song of "The Mistletoe Bough," familiar to all, has doubtless done much to keep alive the old customs connected with mistletoe. At the present time, however, the mistletoe is rarely found on the oak in England, and is so scarce that the "kissing bunch"—a bunch of evergreens, ornamented with oranges and ribbons—has taken its place. In this country, on the contrary, the plant, with its dainty white berries, is a menace to the life of thousands of oaks used for shade and ornamental purposes, and hundreds of dollars are spent yearly for its destruction in order to preserve the life of the tree from which it gets its own life and nourishment. When this is going on in a Southern town, in passing along an avenue of oaks one literally walks on a carpet of mistletoe, and as the dainty berries crack under the feet there comes a feeling—is it inherited?—that one is almost committing an act of sacrilege to thus tread upon the "curer of all ills."—*New York Evening Post*.

* * *

The custom of the Massachusetts Horticultural Society of giving prizes for school gardens and herbariums has led to considerable competition by school children in many towns of the state. Forty prizes are offered, the amount of money prizes reaching \$200. The highest prize, \$15, is given for a school garden; the highest individual prize is \$7, and this ranges down to 50 cents. Besides these incentives, several interested individuals now swell the list, and altogether it has become quite a feature of Boston exhibitions. The age of the exhibitors must be under 18, but many admirable collections are made by much younger children. The work of the competitors must be confined to native American plants in their wild state, in which work of course the assistance of the schoolteachers or parents is necessarily more or less invoked. But the effect of the undertaking tends unquestionably to inculcate in children the habit of studying nature as they go along. This side-line of the Massachusetts Horticultural Society might be advantageously imitated in every other state in the Union. To initiate the young in the knowledge of trees and plants, the love for which naturally follows, will lead to the consummation so often poetically expressed as making the country "blossom as the rose," and will tend to more quickly offset the crude blundering which has disfigured the landscape in so many places, and made the dooryard a place to turn one's back upon.



BERBERIS NEPALENSIS.

ing killed not only in Washington, D. C., but in England. I may remark, too, that the Portugal laurels proved the hardier in the severe English winter of 1860-61. *Crataegus Pyracantha* is hardy to Long Island without a wall, but it is an excellent wall plant, if fastened, growing to fifteen or twenty feet sometimes, and bearing abundance of its handsome orange scarlet fruit. The variety, *Lalandi*, is reckoned an improvement. *Cotoneasters* are a good deal used as wall plants in England, but rarely

THE CLAY MONUMENT, LEXINGTON, KY.

The halo of historic glory surrounding the tomb of Henry Clay easily overshadows the tall monument that rises above it, yet it is unfortunate that the latter is not artistically what it should be. Nevertheless, it is impressive, and gains much dignity by the wise treatment of its site.

The section, 300 by 150 feet at its longest and widest part, that the monument occupies alone, is broadly rounded at one end and terminates in a slender point at the other, and the main avenue passing in front of it is depressed so that the ground rises in a sharply rounded slope to the base about fifty feet back from and thirteen feet above the driveway.

Looking along the principal vistas leading to it the monument is seen against the background already fine and constantly improving as the splendid trees of which it is composed increase in size. The two trees in the foreground of the accompanying illustration are, on the right, a deciduous or bald, Southern Cypress, on the left, a White Pine.

* * *

The monument throughout is of the cream-colored Kentucky magnesian limestone that is said to greatly resemble the famed Caen stone of Normandy.

In form it is a Corinthian column, consisting of stereobate, pedestal, base, shaft and capital, and is surmounted by a statue twelve feet high of the great statesman.

The sub-base is about twenty feet high and forty feet square. In the middle of the south side is the entrance to the chamber, 12 by 14 by 16 feet in size, and lined with polished Kentucky marble, in the center of which stands the stone sarcophagus inclosing Clay's body, and at the foot against the wall, another containing that of his wife.

The remaining space within the sub-base has never been finished, and is closed off from the completed chamber, but in it is stored a block of Missouri marble, suitably inscribed, that was donated by the State of Missouri for use in the monument.

This block, some four feet long, two feet wide and eighteen inches thick, could not be used in the monument proper because of being a different material, but it will probably shortly be placed as a flagstone, or step, before the doorway of the tombs, and it seems good to know that Missouri's handsome memorial will have a fitting position.

* * *

The opening into the occupied chamber is seen in our illustration, which is from a recent and by far the best photograph of the monument. This doorway is closed by a heavy bronze screen that is kept locked, but through the courtesy of the superintendent I was permitted to enter and examine the interior in detail.

The sarcophagus presented by Struthers of Philadelphia, who, I believe, also made the one inclosing the body of Washington, has on the lid the name Henry Clay, surmounted by a wreath of Ivy and Laurel, and around the lid is a border of the same leaves. On the side facing the door is cut the extract from Clay's farewell address to the Senate, beginning: "I can with unshaken confidence," etc., and ending, "I believe to be the true interests of my country," and on the opposite side: "I had rather be right than be President," and "Truth is mighty and public justice certain," and on the foot a shield with



THE HENRY CLAY MONUMENT, LEXINGTON CEMETERY,
LEXINGTON, KY.

thirteen stars.

The statue of Clay that surmounts the column is not the one that should stand there.

In 1860 the Kentucky legislature appropriated ten thousand dollars for the completion of the Clay monument by surmounting it with a statue of Mr. Clay to be executed by his fellow-townsman, Joel Hart, the sculptor, who was just returned from Italy. History says that "unfortunately the monument association found it necessary to use a large part of this sum in liquidating previous expenses, and for that reason a stranger was employed to make the statue."

A clay model made from life by Hart as the pre-

PARK AND CEMETERY.

liminary work for his statue of Henry Clay, now in the Louisville Court House, served as a model for the Italian "stranger," Caribin Giannini, in working up a model 12 feet high, the same size as the statue on the monument, but he died before executing the work in stone, and this was done by his brother.

* * *

Mr. Bell, having been superintendent of the cemetery since its inception in 1849, recalls numerous interesting incidents connected with the life and burial of Clay. Just before leaving Lexington for his last journey to Washington Henry Clay visited the cemetery and gave directions for the removal of the remains of his mother, Elizabeth Watkins (formerly Clay), from the farm fifteen miles away, where she died, and was buried, to these grounds where he himself intended to take his last sleep, and the monument that marks her grave bears the following inscription, written by Clay: "This monument, a tribute to her many domestic virtues, has been prompted by the filial affection and veneration of one of her grateful sons. H. CLAY."

He also spoke of intending to have moved there the dust of a loved daughter, who died aged twelve years at Lebanon, O., August 11, 1825, while en route with the family by stage from Lexington to Washington. Owing to his own death this was not done until a year or two ago.

* * *

An incident that I do not recall having seen in print is a vivid recollection with Mr. Bell. When Clay was returning home after the passage of the Missouri Compromise bill his admiring townsmen prepared a rousing reception for him. He was expected by carriage from Maysville, and to reach home had to pass through the town. Arriving after dark, he found the city brilliant with bonfires and filled with excited crowds of enthusiastic citizens and strangers, all of whom were eager to take part in the demonstration and listen to the expected speech. Clay was led to the upper balcony of the old Phoenix Hotel, which still stands, where his appearance was greeted with tremendous applause. He bowed and said:

"Ladies and gentlemen, very glad to see you, very glad indeed, but there is an old lady who lives about a mile down the road that I would rather see than any of you. Good night."

And the crowd went wild, while Clay hastened to be driven out the Richmond Pike to Ashland and the "old lady."

* * *

When Clay died in Washington his body was put in a casket that was inclosed in a mahogany box for the long journey to Kentucky. Among the prominent men who accompanied the remains or

attended the funeral Mr. Bell recalls Stephen A. Douglas of Illinois, General Cass of Michigan, Foote of Mississippi and Sam Houston of Texas. The remains were consigned to the old receiving vault which is built in the side of the deepest and steepest "sink" in the cemetery. Comparatively few know that shortly afterwards (within a year) the body was removed to a small, old, and since abandoned neighboring cemetery, where it was placed in a vault belonging to a citizen of Lexington.

When the fact became known it roused so much feeling that the body was quietly returned by night to its original resting place, there being no one present when this was done but Mr. Bell and his workman.

* * *

When the body was again disturbed to be deposited in the chamber within the monument the casket was taken out of the box and put in the stone sarcophagus, and the latter permanently sealed. The mahogany box was afterwards cut into souvenirs of various shapes, principally canes and rulers, which were eagerly sought by friends and admirers of the great Kentuckian. *Fanny Copley Seavey.*

THE PARKS OF OMAHA, NEB.

The approaching Trans-Mississippi and International Exposition to open June 1 next at Omaha, Neb., makes the municipal features of that city of especial interest at this time, and among these the park system is of particular importance.

With a population of some 140,000 it possesses a park area of 560 acres, and an extensive boulevard system in connection therewith. In detail the park system would figure as follows: Hanscom Park, 57½ acres; Elmwood Park, 215 acres; Fontenelle Park, 110 acres; Miller Park, 80 acres; River-view Park, 66 acres; Bemis Park, 10 acres, and several scattering squares and smaller breathing spaces.

Hanscom Park is located in the southwest part of the city, and was donated to the city for park purposes by Andrew J. Hanscom and Joseph G. McGrath in 1872 upon certain conditions, which have been fulfilled. When, in 1889, the Board of Park Commissioners was organized, and took over the control of the parks, this park was in a very crude state, but was covered with a valuable growth of young trees. Plans were made for its improvement, which included two lakes supplied with water from the city works. The water flows into the upper lake over a cascade. In the winter the lakes afford excellent skating, and are much patronized. Greenhouses are also located in Hanscom Park, which supply the flowering plants for the other parks of the system. Among the provisions for the public recreation is a large pavilion, used for concert purposes and light catering. The roads are

good and carefully kept, and the planting features are maintained in excellent condition. The view given herewith is taken in that portion of the park given to sub-tropical effects, and speaks for itself.

Elmwood Park, in which the beautiful view herewith shown is taken, originated in a donation of fifty-five acres from several citizens, and it is located three and one-half miles west of the postoffice. The piece of land offered so many advantages for park purposes, and was, moreover, contiguous to land of a pleasing character, that the commissioners as early as possible added to its area until it now covers 215 acres. It was originally partially covered with tree growth, which included some very valuable elms. A brook of spring water ran through the tract, which gave opportunities for lake development, which has been improved. The undulating surface of the land has aided in producing some very attractive effects. A large amount of money has been expended on this park, the finest of the system.

Riverview Park, situated in the extreme southeast of the city, has natural advantages, which make it, perhaps, in certain senses the most beautiful of the city's parks. It has considerable level surface, which is diversified by more rugged features. From many of its elevated portions beautiful views of the Missouri River may be had, heightening the charm of its scenery. 



VIEW IN HANSCOM PARK, OMAHA.

The plans for Riverview Park were prepared by Mr. William R. Adams, the park superintendent, to whom we are indebted for beautiful photographic views of the several parks. Originally the planning of the system was the work of Mr. H. W. S. Cleveland, the well-known landscape architect, who, however, was compelled to cease his professional work.

The work on Fontenelle Park, a tract of 110 acres, may be said to be only in its initial stages. It is located three and one-half miles northwest of the postoffice.

The eighty-acre tract in the extreme north, just within the city limits, called Miller Park, has its naturally rolling surface relieved by a depression towards its center, in which a large lake of some eight acres has been provided. A small stream of water also flows through the park, partially supplying the lake.

The development of the parks, boulevards which connect the parks, and the smaller squares and spaces, is a continual study and carried on in the progressive spirit which has characterized the growth of the city. Like other progressive cities there have been hard times and good times, and all public improvements suffer from the vicissitudes of prosperity in sympathy with the community from which they are derived, but it may be expected by visitors to the Exposition this year that the



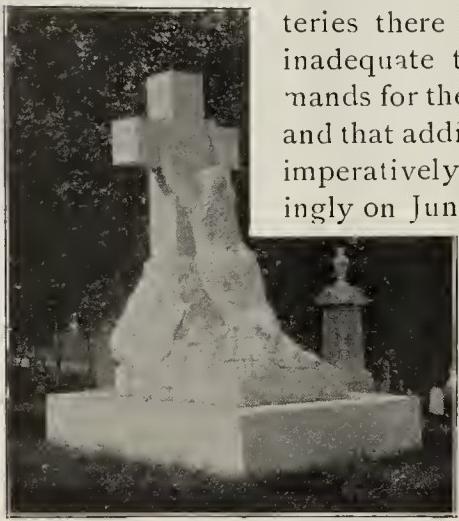
VIEW IN ELMWOOD PARK, OMAHA.

parks of Omaha will afford a significant indication of the spirit which has determined the city.

FERNCLIFF CEMETERY, SPRINGFIELD, O.

The rapid growth of Springfield, O., as early as 1863, forcibly reminded those interesting themselves

in such matters, that the cemeteries there in use were wholly inadequate to meet future demands for the repose of the dead, and that additional grounds were imperatively required. Accordingly on June 23, 1863, a meeting was held, at which committees were appointed to meet later and report. A later meeting occurred July 20 of the same year, and the reports of committees were



THE GARDINER MONUMENT.

received favoring the formation of an association, and this was organized on August 3, and the legal amount of stock, \$10,000, was readily taken. On August 25 a charter was secured under the laws of Ohio, and on September 12, 1863, under the name of The Springfield Cemetery Association, seventy-one acres of land northwest of the city limits, and beautifully situated on the hills and cliffs north of "Brick Creek," were purchased. By a subsequent purchase this was increased to 125 acres, which is in round figures the present area of the cemetery.

In deference to the characteristics of the property the name of Ferncliff was adopted, and is most appropriate. The entrance for a distance of some 1,800 feet is a continuation of cliffs, rising to a height of from forty to fifty feet, literally enshrouded in ferns, with broken boulders, more or less numerous, at their base, giving a wildness and picturesqueness, very attractive and interesting.

It was thought by many that the property was not suitable for the purpose intended, but the association, with Mr. John Dick, the present superintendent, a skilled landscape gardener, entered rapidly upon the work, and notwithstanding the many obstacles, has transformed the place into a most beautiful cemetery, combining the rugged pictur-esque ness of cliff and rock scenery with the charm of the peaceful landscape, where lawn, shrubbery and trees, with the varied changes of sunshine and shadow, make a perfect resting place for those who have gone before. Mr. Dick believes in carrying out landscape work in conformity with nature in

her brightest moods, and so has reduced the harshness of the wilderness which he first surveyed to



CENTRAL AVENUE.

the attractive pictures which now confront the visitor to Ferncliff Cemetery. The improvement, however, is not yet completed, although 7,500 of Springfield's dead repose in the finished tract. "No pen can do justice to its wild and wierd beauty; so wild and wierd are some parts of the cliffs to this day that they have been christened by many 'Devil's Half Acre.'"

The grounds above the cliffs are fine knolls divided into sections by winding avenues through the ravines. Up to the present time there have been fourteen sections laid out, ranging in area from two to four acres.

The highest point in the cemetery is a knoll, circular in plan, known as Indian Hill, which must at one time have been an Indian burying ground;



THE BOOKWALTER VAULT.

this now contains the remains of 105 Clark County soldiers. The lot was donated for that purpose by the association to the G. A. R. In excavations in other parts of the cemetery Indian remains have been found, leading to the conclusion that the grounds must have been used as a burying place long years ago.

The flora of Ferncliff consists of nearly all of the native trees, shrubs, vines and wild flowers, some of which are rarely found in any other part of the country. This affords many opportunities for studied effects.

On a knoll in the cemetery now called Sylvan Hill, are to be found the remnants of what once must have been a botanical garden, wherein was planted a great variety of such herbs and roots as the Indians used for remedies. It is not known to have been planted specially for this purpose, but from the great number of different botanical specimens on so small an area, coupled with the fact of

after. For a long time after their final removal to their reservation in southern Minnesota, by the United States government, these Indians made frequent visits to the scenes of their childhood and visited the graves of their dead.

These people, like most other Indians, venerated the burial places of their dead, and would protect them at any cost from desecration. At least five different methods of burial are known by the writer to have been practised by these Indians in the region named; but only one of the more common methods will be here spoken of.

Just to the right and slightly above where the Little Cedar joins the Big Cedar river, in Iowa, is a little village called Bradford, said to have been named in honor of Captain Bradford, a commanding chief of the Winnebagoes in the early days. Bradford was a good man, and was always trusted and beloved by the whites.

Along the Cedars, near Bradford, was one of the principal camps of the Winnebagoes, and had been long before the whites made their settlements there. Bordering the Little Cedar at Bradford, and extending for many miles to the north, forming in fact the eastern valley side of the stream, is a high and most beautiful belt of country. No timber occurs on this elevated area near Bradford; but all is open prairie, or was before the settlement of the whites. On this elevated ridge, overlooking their camping ground below, was one of the Winnebago burial grounds. Here more than twelve Indians had been buried.

After death their bodies were carefully wrapped in their blankets, and then carried to this burial place, and laid on the prairie sod. A quantity of provisions, their guns, and other things, supposed to be needed in the "happy hunting ground," were placed at their side. Over the body then an inclosure was formed by driving split-out staves or slabs into the ground obliquely on each side, meeting at the top in an inverted V-shaped form.

As their graves were located on the prairie, no log crib was built around the inclosures, as was often done in the groves; but, instead, clods of earth were arranged all around the outside, completely covering the slabs from view, save a slight portion at the top. The ends of the structure were closed by a wall of sods, and the whole had the shape of the roof of a house, built on the ground.

The Indians in passing up and down the streams during the summer and fall placed wisps of June grass on the graves of their dead. *Clement L. Webster* in *Popular Science News*.



HANGING ROCK, LOOKING WEST.

the well-known medicinal character of some of them, points to this conclusion as a plausible one.

The water supply comes from a spring which issues from an aperture in the solid rock.

Ferncliff Cemetery is carried out on the lawn plan, and its business is conducted with a view to perpetual care. The development of this feature is receiving particular attention from its importance.

There are a number of attractive monuments distributed over the grounds, as is suggested by the views. The association is now contemplating the erection of a chapel and an office building.

GRAVES OF THE WINNEBAGO INDIANS.

During the days of the early settlement of northern-central Iowa, by the whites, the region was occupied mainly by the Winnebago Indians. Their home it had been for a long period of time; and it continued to be so to a greater or less extent, for a considerable period

Mr. William Falconer says of the late Mr. Charles A. Dana: "We never knew a private gentleman who knew trees and plants generally better than did Mr. Dana; he knew their geography, history, adaptability and use, and there was an exceedingly warm place in his heart for intelligent horticulturists. In his death America has lost one of her greatest and noblest men, and horticulture a founder of what is most refined in gardening."

❖ ❖ ❖ SOME RECENT MEMORIAL FOUNTAINS. ❖ ❖ ❖

The accompanying illustrations represent three memorial fountains, recently erected. There is no class of adornment of our public places which combines the useful and ornamental in a more satisfactory

manner than fountains, and they form excellent memorials. They can be designed on artistic lines to meet a moderate outlay, or they may be carried out to include the costliest of art accessories.

The gift of Mr. C. Bowditch Coffin of Newton, Mass., to that city, is a bronzed iron lamp fountain, twelve feet high, on a granite base. It is elaborately decorated with reliefs of flowers and fruit in clusters and festoons. The water is supplied through a dog's head, and overflows from the first basin into those designed for horses and dogs. Above the dog's head is a copper plate bearing the inscription, "The gift of C. Bowditch Coffin, a citizen of Newton, 1897." Two aluminum drinking cups with original inscriptions are attached. The column is surmounted by a handsome square lantern with frame of oxydized copper and lights of beveled plate glass. It will be lighted by electricity. The fountain was designed and made by M. D. Jones & Co., Boston.

* * *

The Stevenson fountain, erected in memory of Robert Louis Stevenson at San Francisco, Cal., is an unpretentious affair twelve feet high, consisting of a marble pedestal with two bronze inscription tablets, the fountain, appurtenances and a bronze ship surmounting it. On one of the bronze plates a verse in Samoan from Ruth's adjuration to Naomi; on the other Stevenson's own epitaph:



FOUNTAIN AT
NEWTON, MASS.

"Under the wide and starry sky,
Dig the grave and let me lie.
Glad did I live and gladly die,
And I laid me down with a will.
"This be the verse you grave for
me,
Here he lies where he longed to be.
Home is the sailor, home from the
sea,
And the hunter home from the
hill."

Cut on the Kearney street face of the pedestal is the name of the author and an inscription containing his simple "rules of life." Bruce Porter and Willis Polk, architects, were the leading spirits in the memorial. It was cut by J. D. McGilvray, and the bronze work was executed by Whyte & DeRome.



THE STEVENSON FOUNTAIN, SAN FRANCISCO, CAL.



MEMORIAL FOUNTAIN,
DENVER, COLO.

The Hurlbut memorial fountain is a gift to the Young Men's Christian Association of Denver, Colo., by Mr. and Mrs. Hurlbut of that city in memory of their son. It is between five and six feet in height, and was cut from an original design by Henry Read by J. A. Byrne in Carrara marble. It consists of an upright slab, having a conventional design, cut in a low relief about the lion's head, from which the water flows into a shallow basin. The shaft is entirely detached from the back. The style is Seventeenth Century Renaissance. Appropriate inscriptions explain its purpose.

NATIONAL CEMETERY, ANTIETAM, MARYLAND.

The battle of Antietam, which was fought on September 17th, 1862, is looked on as one of the great battles of the war, and it was a great one, for there it was that the confederates received the check which stopped their invasion of the North. It has not been accorded a place in history commensurate with its importance and as being one of the foremost battles of the war. The field has not been dotted with monuments like that of Gettysburg and until recently there was nothing scarcely to tell one of the strife which occurred there, save, the National Cemetery. But since the government has opened roads along the important battle lines and placed tablets in positions where the troops of both sides fought, it is a very different field from what it was, and vastly more interesting. The roads are opened much as they are at Gettysburg, following the lines where troops were massed.

The tablets are of bronze, with white lettering on dark ground, and contain the doings of brigades, divisions and corps, rarely of regiments. The battle-field covers the town and vicinity of Sharpsburg and extends to across the Potomac at Blackford's Ford to Shepherdstown, W. Va. The Shepherdstown fighting occurred three days later, September 20th, and as the whole of it on the Union side was borne by the 118th. Pa. Vol., and its loss there was 269 in killed, wounded and missing, the tablet placed there by the government is devoted altogether to that regiment, the only case of a regimental mention that I noticed anywhere on the field.

The cemetery of Antietam is beautifully situated on a commanding elevation. It overlooks the country in all directions and allows of an unobstructed view away across a fine agricultural country towards the high peaks of the South Mountain, and at the foot of the mountain can be seen Boonsboro, through which the Union troops filed on the eve of the battle. The line of the Antietam creek can be told by the timber fringing its sides, there being but little of it in other places. The cemetery covers 10 acres, but being well filled with trees, shrubs and headstones, it does not give the impression of being so large. I procured two photographs, one showing the National Soldier's monument by itself, the other, a rear view of it, taken from what is the West Virginia section.

The total height of the monument is forty-seven and one-half feet, and its cost \$30,000. The inscription reads: "Not for Themselves, but for Their

Country" and nearer the base, "September 17, 1862."

In a circle of about 100 feet from the monument is a row of rather round headed sugar maples, standing 36 feet apart.

As with all the National cemeteries, the plantings having been done many years ago, there are none of the newer shrubs and trees to be seen. I noticed some exceedingly fine Deodar cedars, perhaps 25 feet high, their silvery foliage contrasting nicely with that of other trees near them. Other trees are Himalayan pine, White spruce, White pine, Hemlock, Norway spruce and Arbor-Vitæ.

The headstones in this cemetery are about 2 feet high by one in width, and contain the name of the soldier and his state, as well as his record number, but not his regiment. The graves are in continuous



NATIONAL CEMETERY, ANTIETAM.

circles, except for the broad paths which here and there intersect them. Each state has its dead separate. The West Virginia section which the picture displays, is a type of the whole. The dead gathered from some of the surrounding battlefields as well as Antietam, give a total number of interments of 4737, of which 1865 are "unknown."

Passing through the cemetery, and gazing oft across the fields where the battle had raged, how it carried me back to thirty-five years ago, for I was one of the 50,000 Union troops who struggled there. Close beside me in the cemetery where I stood were the graves of several of my old regiment, killed in the battle, two of whom I had known well.

Most truly could I say with the Poet:

"Methinks I hear the battle drums
You heard so long ago:
Methinks I hear the bugle blasts
That led you to the foe."

For there before me appeared many of the scenes my eyes had beheld in those eventful, by-gone days.
Joseph Mehan.

GARDEN PLANTS—THEIR GEOGRAPHY, XXV.

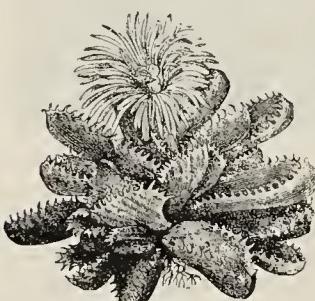
FICOIDALES.

THE ECHINOCACTUS, OPUNTIA AND MESEMBRYANTHEMUM ALLIANCE.

(Continued.)

Pereskia has thirteen species, all from tropical America and the West Indian Islands. These plants have leaves like other well formed exogens, and they give some countenance to the old idea that "cactuses" were a sort of gooseberry. They are often used to graft epiphyllums upon, but various of the quick growing columnar stemmed cereus look much better for the purpose, and give, I think, better support to the foster plant.

Mesembryanthemum is the "Hottentot fig" genus and the chief old world expression of this alliance. They have names innumerable (over 400 in the dictionaries), and it may be that there are 300 species, chiefly South African, with a few scattered in Mediterranean countries, Australia, New Zealand, Brazil, and even California, it is said. It may be that they are adventive in some of these regions, for such seeds are sometimes capable of long ocean voyages, and painstaking comparisons often reveal a wonderful divergence of form in species. It is rarely nowadays that a collection of these plants is seen outside of the best botanic gardens, and they are apt to be neglected even there. Very many are



MESEMBRYANTHEMUM TIGRINUM.



MESEMBRYANTHEMUM TRICOLOR.

capable of rich flowering effects, however. They are annual or perennial herbs, or evergreen sub-shrubs and trailers. These latter with good care in their growing period make admirable bracket plants in greenhouses, growing down in curtains of pleasing foliage—often three or four feet long, and smothered with bloom in their various seasons. Their culture is very similar to that of cactæ, and they are certainly far more easy to handle. It is not quite understandable why they have passed out of sight. The "ice plant" and one or two others are almost all that are commonly met with nowadays. I feel sure that for California they are well worth attention. Their flowers range in color from scarlet through crimson and purple in many shades to pink,

white, yellow and orange. Several species have some economic value.

Tetragonia has twenty species. *T. expansa* is the "New Zealand Spinach," so called. The "Genera Plantarum" does not credit the genus to those islands.

Aizoon has eight species of succulent annuals and sub-shrubs from Mediterranean countries and the Canaries.

Sesuvium is the "Sea purslane" genus, common on the seashores of the tropics. *S. pentandrum* extends northwards to New Jersey.

Pharnaceum has sixteen species of succulent herbs or sub-shrubs. They are mostly confined to South Africa and St. Helena, and some species are pleasant salad plants.

I have given all the accepted genera of the cactus tribes, chiefly for the benefit of cultivators in California and the South, who make them a feature.

My thanks are due to Professor Trelease of the Missouri Botanic Garden, who caused to be pointed out the synonymy of "Mamillaria" Williamsii. It has certainly a growing quantity! Professor Goodale of the Gray Herbarium of Harvard University has also caused attention to be directed to the discrepancy of appearance between the photo of *Cereus* sps. and tab. 4.707 of the Botanical Magazine. Finally, my thanks are due to Geo. Nicholson, Esq., curator of Kew Gardens, who says "Your cuts of cacti, etc., are named in conformity with Kew nomenclature."

The polyglottous names constantly being applied to these plants by modern botanists no authority seems willing to answer for.

It is unfortunately true that the practical result of a vast amount of modern investigation is stereotyped confusion.

Trenton, N. J.

James MacPherson.

The December *Century* contains an article by Miss Eliza Ruhamah Scidmore on "The Wonderful Morning Glories of Japan", which is another revelation of what the Japanese can do in the cultivation of flowers. For a few years past the florists' catalogues have contained glowing descriptions of the "Imperial Japanese Morning Glories", which while not conveying one half of the real merits of the flower, failed also to explain the necessary details of cultivation to meet with success. Hence generally the flower has not met with the reception its beauties merited. With some knowledge of how to treat the hard shelled seeds, and a certain care which the growing of the plants demand, a planting of Japanese Morning Glories in an ordinary way will astonish the grower by the variety of shades and magnificent proportions of the flowers.

COLONEL WOOLDRIDGE AND HIS GRAVEYARD.

There are many hobbies ridden, even in these prosaic days, but it is doubtful whether there is to be found anywhere else one quite so original or peculiar as that of Colonel Henry G. Wooldridge in the cemetery at Mayfield, Ky. A portrait of the Colonel with two views of his remarkable cemetery lot are given herewith, and one might almost say description is superfluous were it not for the eccentricities displayed in the whole undertaking.

Henry G. Wooldridge, or "Uncle Henry," as he is familiarly known, is 75 years old, and was born in Middle Tennessee, November 29, 1822, the youngest of a family of eight children. He is now

fox before him, cost \$130. These had all been placed on his lot, when he decided to have a sarcophagus erected, and the order was given for one to cost \$220. The last statues to be erected were those of his three remaining brothers, which cost him \$360.

The statue of himself mounted on his horse, the two dogs, deer, fox, base of vault and seven statues of relatives were all cut from limestone quarried at Bedford, Ind., and as may be inferred from the preceding, are crude and very commonplace. The pose of each limestone statue, perhaps, excepting the one mounted on the horse, is extremely stiff and unnatural, more like the images of the dead rather



COLONEL WOOLDRIDGE AND HIS CEMETERY LOT AT MAYFIELD, KY.

the sole survivor of his large family, and "the last of his race." He removed to Kentucky when 21 years of age, and has resided in Mayfield since. He bought a lot in its cemetery about seven years ago and erected a marble shaft, costing \$250, on which was cut the date of his birth, and a bas-relief of his horse. This did not entirely suit him and he secured a life-size statue in Italian marble, for which he paid \$1,000. This and the marble shaft are the only creditable works in the entire collection. He next turned his attention to his family and ordered statues of his eldest brother and mother, which were erected at a cost of \$250. A favorite niece was next remembered by a statue costing \$105. A little girl friend who had attended him during sickness was gratefully remembered by a \$115 statue. His favorite thoroughbred hunting horse, "Fop," was not forgotten, which cost him \$825 for the group of himself and his horse. Then came the desire to have his dogs close by him in death. "Toe-head," his deer hound, with a deer in front of him, were bought for \$170, and his fox hound, "Bob," with a

than the representation of living people.

The lot on which these eighteen pieces are placed is only 16 by 30 feet, but Colonel Wooldridge is thinking of enlarging it for his three sister and his father. One feature which cannot be seen in the illustration is his trusty gun, which is cut on the top of his vault.

Colonel Wooldridge was never married; though very old, he never uses spectacles, but he is unable to walk, and so is driven out each day to enjoy his lot. He is also looking ahead, and has bought his burial robe and metallic casket for his own departure.

One peculiarity about Colonel Wooldridge's collection of statues is that none of the images, except his own, are made to represent any of the persons whose names are carved thereon, but are ordered as memorials. He has expended some \$5,000 on this lot, which is situated on the brow of a small hill at the right of the entrance to the cemetery, and can be seen from a great distance. It is becoming one of the sights of the town. *W. A. Austin.*

RECEIVING VAULT, NEW BEDFORD, MASS.

Municipal corporations having cemeteries under their control, are now generally exercising considerable activity to effect improvements and provide the necessary facilities for conducting such properties on the more modern ideas now widely operating.

New Bedford, Mass., last year found it necessary to increase the area, by purchase, of Oak Grove cemetery, and its burial grounds are so rapidly filling that further accommodation is more or less imperative. The Cemetery Board before undertaking improvements, examined the cemetery development question very carefully, in relation to modern cemetery practice, and requested the City Engineer to study the subject and submit plans for the work. This has been done and the lawn plan is to be adapted to all new work. The advantages of this

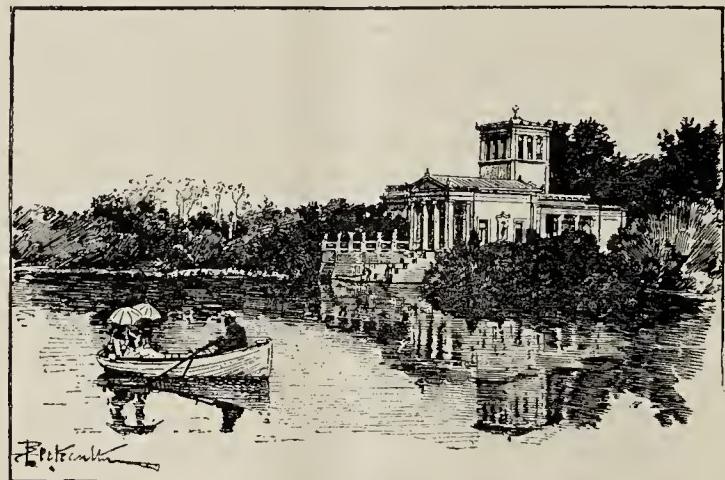


both as regards appearance and the facility afforded for the better care of the lots always impresses the thoughtful mind, and a comparison between a section so treated and one under the old style is generally a potent argument. There is another and most important advantage in the lawn plan for cemetery controlled by municipal authorities,—it avoids so many paths and the waste of lot surface for that purpose.

The illustration herewith shows a new Receiving Vault recently completed in the Rural cemetery of the old town. As will be observed, it is constructed of rubble with dressed trimmings and is of very attractive appearance. It is a satisfaction to note the increasing interest taken by so many cities in their municipal cemeteries, and the apparent appreciation of the landscape features in connection with additions and improvements.

THE PETERHOF PALACE, RUSSIA.

The Peterhof Palace, where the president of the French republic was recently the guest of the Czar, was built in 1720 for Peter the Great by the French architect, Leblond. On this beautiful site, where he had already built a summer residence, the Chateau Montplaisir, Peter the Great dreamed of a Versailles

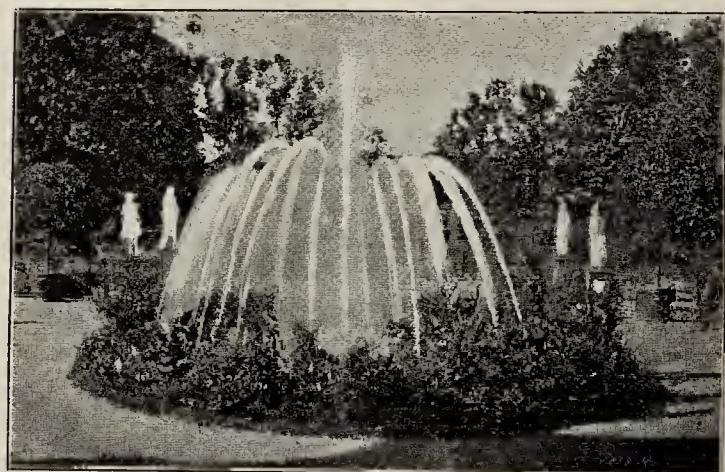


ON THE LAKE.

which should eclipse that of Louis XIV. The Peterhof, enlarged and beautified by the Empresses Catherine I., Anne, Elizabeth and Catherine II. and by Czars Paul I., Alexander I. and Nicolas I., does not surpass, but recalls Versailles.

The main building of the Peterhof and the pavilion are in red and white—bright red and brilliant white—like many other imperial dwellings in Russia. The green roof is of iron and surmounted by gilded domes. Gold is used with lavish profusion, and would have a worse effect were it not that its glitter is tempered by the abundance of living water and verdure.

In front of the palace, from the shore of the bay

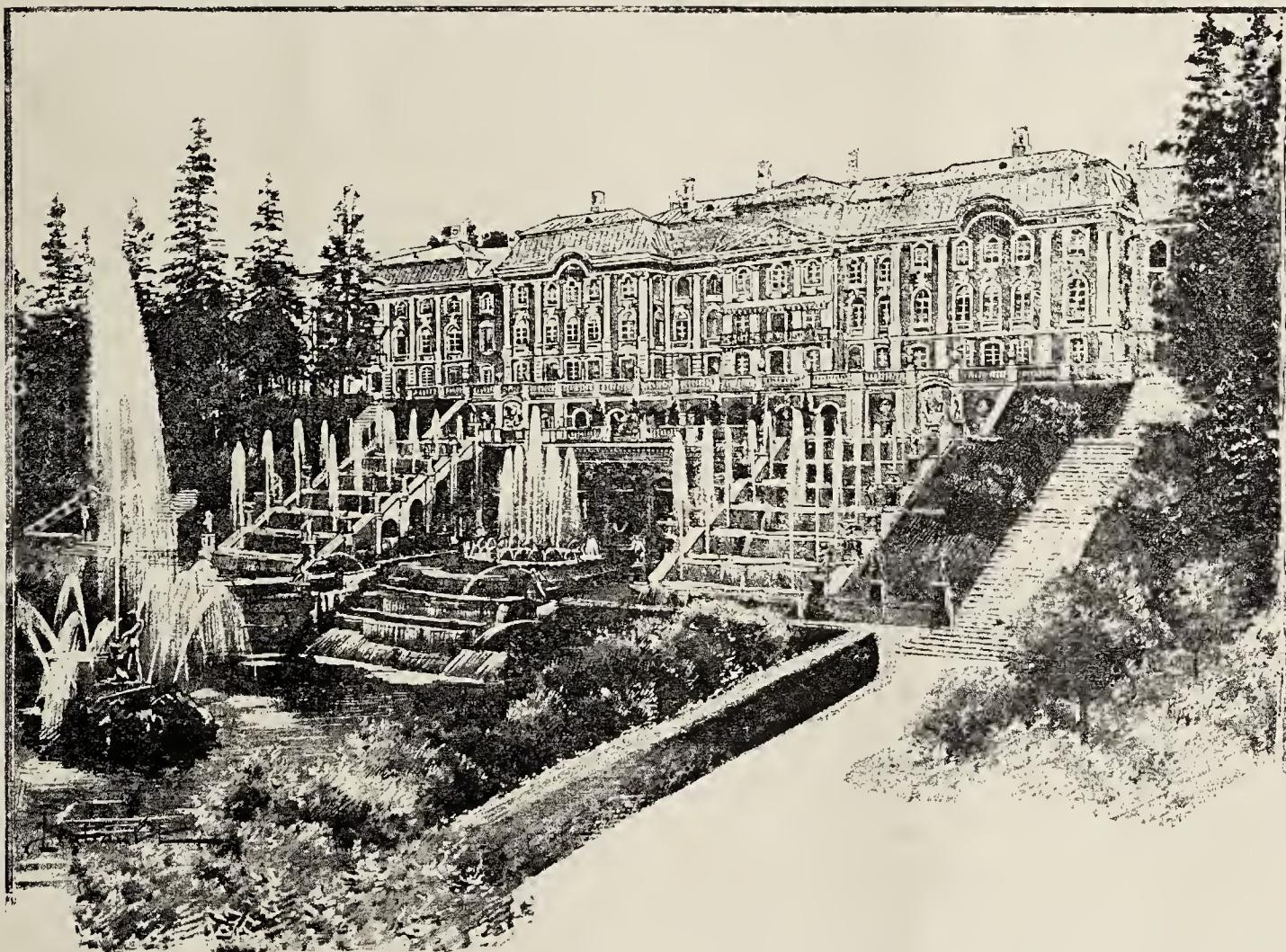


FOUNTAIN BETWEEN CASCADES.

of Cronstadt, there extends a vast terrace, from which two cascades pour their waters into the pool of Samson, over six great levels, the steps of giants, bordered with statues and vases, blinding with their wealth of gilding. Under the terrace, be-

tween the two cascades, is a grotto, in front of which a group of seventeen jets of water pour into the pool. In the midst of the Samson pool is a bronze Samson gilded, the work of the sculptor, Kostovsky, tearing apart the jaws of a lion, from whose throat pours forth a column of water eight centimeters in diameter and twenty-two meters high. Still other fountains are arranged around the

Italy, and the empress remained at Nice, while the emperor returned to Russia. When the empress rejoined her royal husband she found that he had erected these two pavilions as a souvenir of their Italian journey. More important is the Chateau Alexandria, in the Gothic style, constructed for the empress of that name, and which the Czar, Alexander III., usually selected for his summer resi-



THE PETERHOF PALACE AND TERRACE.

Samson, and all this water, after having been raised and having fallen again, been atomized as spray, after having rippled and hissed and roared, escapes into the Gulf of Finland, through a canal which extends to the wharf of the palace.

The park is filled with statues, colonnades in semi-circle, and especially with fountains: those of Adam, Eve, Triton, the Cascade of Lions and many others, all of which are in action when the great fountain plays.

The fantasy of the Czars has scattered buildings of all sorts over the grounds of the Peterhof: Morly, which looks across a pool; the Hermitage, the Belvidere, the Birch pavilion. On the islands of Olga and Tsaritzine, which are in a little fish-pond, are two buildings in the Pompeian and Italian styles. The Czar Nicolas I. and his empress, Alexandra Feodorowna, had made a journey to

dence. The public has free access to the park of the Peterhof, through which are built a great number of villas, where, during the months of June, July and August, the court is located.

A private garden, inclosed by a grill, is situated behind the grand palace. At the corner of the palace on the left, at the entrance to the garden, stands the pretty church of SS. Peter and Paul, erected by Rastrelli in 1851.

The Peterhof is thirty kilometers from St. Petersburg and a dozen from Cronstadt.—*From l' Illustration.*

The French government will make strenuous efforts to rival the World's Fair in its great Exposition of 1900. The French are a tasteful people, and we may expect to see elegance and refinement as ruling characteristics of the scheme.

LEGAL.

CANNOT REMOVE BODIES FROM LOTS NOT PAID FOR.

A decision, the importance of which can hardly be overestimated, has been rendered by the supreme court of North Carolina, in the case of State against McLean and others. In it, the court affirms a judgment of the superior court, Alamance county, in which all but two of the defendants were convicted, as the indictment charged, of counseling, procuring, and commanding certain named persons, all of them charged with acting without due process of law, and without the consent of those persons whom the statute requires should be consulted, and their consent procured, to open the grave of Nathaniel Small, for the purpose of taking therefrom his dead body, and to actually remove the body from the grave.

At the time the offense was committed, the defendant McLean was mayor of the town of Burlington, another of the defendants was keeper of the town cemetery, and the other defendants were town commissioners.

The defense set up by McLean was that he was the attorney at law of the town, and that the part he took in the matter was simply as legal adviser to the board of commissioners. He admitted on the trial that he advised the other defendants that they could lawfully remove the body.

The other defendants, except two named Holt and Heritage, undertook to defend their action on the ground that, although they commanded, counseled, and procured the opening of the grave and the removal of the body, their action was in the discharge of their official duties, and under due process of law and in good faith.

To better understand the case, the following facts must also be taken into account. Small died in 1887, and was buried in the Lutheran Cemetery in the town of Burlington. Several years afterwards the town authorities, by consent of all persons interested, at the expense of the town, removed the bodies which had been buried in the Lutheran Cemetery to Pine Hill, the town cemetery. The body of Small was among them. January 5, 1897, a considerable time after the reinterment of Small's body, the town authorities, who were the defendants in this prosecution, in regular meeting adopted a report made by the committee on the business of the cemetery, which was in part in the following words: "Section 1. We find that eighteen lots have been taken and used by parties who have paid nothing for the same, and that said parties have no note or memorandum in writing in regard to the transaction, signed by the party to be charged; and, as to these lots, the committee recommend that the secretary of the board of commissioners notify the parties who claim the same that, unless they come forward and pay for said lots in full within sixty days from the date of said notice, that the bodies buried on said lots will be removed to that part of the cemetery which is free." Notice in accordance with the foregoing, was received by J. W. Small, the next of kin of Nathaniel Small, February 1, 1897. Instead of paying the \$13.40 demanded of him, J. W. Small forbade the removal of the body, and, in spite of his protest, the body was removed to the free part of the cemetery.

The first assignment of error, on the appeal, related to the refusal of the trial judge to admit testimony offered to show the good faith of the defendants in the matter of their having ordered, procured and commanded the opening of the grave and the removal of the body. But the supreme court holds that it was unnecessary to allege and prove a felonious intent, or, indeed, any specific intent, on the part of the defendants, other than the intent to do that which they actually did. The reason for this is that it holds that the statute of North Carolina forbade what they did in its provision: "That any person who shall without due process of law, or the consent of the surviving husband or

wife, or the next of kin of the deceased, and of the person having the control of such grave, open any grave for the purpose of taking therefrom any such dead body, or any part thereof buried therein, or anything interred therewith, shall be deemed guilty of a felony, and upon conviction thereof shall be fined or imprisoned or both, at the discretion of the court."

There are many of its decisions, the court says, to the effect that the only intent necessary to be shown in the doing of an act which is forbidden by law is the intent to do the act. If, however, a grave should be opened, and a dead body removed therefrom, by a person who had made an honest mistake as to identity of the grave and body, after having received the permission of the next of kin of the person whose grave he thought he was opening, the court says that the intent would not exist to do the act.

Holt and Heritage, who have been mentioned by name, were acquitted; the former, because he was not present at any of the meetings at which the opening of the grave and the removal of the body were discussed, and the latter because he opposed the course pursued by the other defendant.

The defense of McLean, the court pronounced strained, and said found no favor in its eyes. In putting the vote on the report of the cemetery committee and declaring the result, the court says he directly participated in the crime charged. It also says that his duty as an attorney ended when he gave his legal opinion (if, indeed, he could act in the dual capacity of mayor and legal adviser to himself and the board) that they had the right under the law to remove the bodies. When he went further, and said, "Go ahead and remove them," he became an individual actor, and counseled, procured, and commanded an act, the committing of which afterwards was a felony. And the court points out that the defendants were not indicted as mayor and commissioners for any misconduct in office, but as individuals, for counseling, procuring, and commanding persons to commit a felony. They could not be said to have acted in their official capacity in respect to a matter which was not only not a part of their duty to the public, but, in its performance, was a positive crime against the state.

Nor would the court accept the excuse that they made a mistake in the extent and scope of their power, or were misled by mistake of counsel. It says that they had the right to purchase land for a cemetery, and they could make proper rules for its management; but that power could not be extended to give them the right to open graves and remove the dead therefrom, from one point to another, without due process of law, or without the consent of those persons whose permission was necessary.

Lastly, if a surgeon can be convicted for employing a person to open a grave and remove therefrom a dead body, his purpose being to advance medical and surgical science, the court asks, in answer to the suggestion that the statute was aimed only at the desecrators of graves, what reason can be urged against the conviction of persons who command a grave to be opened and the body to be removed because the lot of land on which the deceased has been buried is not paid for by his next of kin?

The work of transferring some 30,000 bodies from the old Union Cemetery in Brooklyn, L. I., to Cedar Grove Cemetery at Flushing, five miles distant, was begun last month, and is being vigorously prosecuted. The northeast corner of the cemetery, wherein the poor had been buried in unmarked graves, was first opened up and the remains recovered were inclosed in boxes, according to a provision of the contract, taken to Cedar Grove Cemetery, and immediately reburied. There was no attempt at identification. A staff of clerks, however, takes care of the identification of the bodies exhumed from marked graves. The number of the old grave is marked on the box containing the remains, and the number of the grave to which it is assigned.



PARK NOTES.

An Improvement Association, to be known as the Branch Brook Park Association, has been organized at Newark, N. J.

* * *

The Board of Park Commissioners of Chattanooga, Tenn., began in earnest, last month, the work of planting shade trees in the streets and avenues of that city.

* * *

State schools of agriculture for girls have been established in Minnesota, and an exchange says that if the graduates become farmers' wives they can show their husbands how to run things out of doors as well as in the house.

* * *

The commissioners of Lincoln Park, Chicago, have received a communication from a representative of the Khedive of Egypt at Cairo, asking for seeds and instructions as to propagation, etc., from the beautiful collection of water lilies cultivated in that park.

* * *

According to the Paris *Figaro* the late Dr. Thomas W. Evans, the American dentist, left \$4,000,000 with which to build a museum in Philadelphia, among the conditions being that a statue to his memory should be erected in a public square to cost not less than \$200,000 nor more than \$400,000.

* * *

The second annual meeting of the Tree Planting Association of New York City was held last month. It now numbers 172 members and is growing quite rapidly and substantially, many of its members being of the old New York families and holders of real estate. Many ladies are enrolled. It is reported that some 126 trees have been planted the past three months.

* * *

The Allegheny, Pa., park trees suffered severely from the heavy snowfall the last of December, many being utterly ruined. When the severity of the storm was realized a large force of men was employed to beat the snow from the trees. At one time grave fears were entertained for the glass roof of the Phipps conservatory in West park and men were kept at work relieving the load.

* * *

Dr. Kate Perry Cain, of Covington, Ky., is reminding people in her locality of "Johnny Appleseed," the quaint character who used to go about the country, starting fruit trees wherever he could, for the benefit of people who would live long after his death, he said. Mrs. Cain is causing shade trees to be planted along both sides of the great eleven mile turnpike that leads from Covington to Independence.

* * *

The Valley City Tree Planting Association, Grand Rapids Mich., has begun its campaign for the coming year. By quiet influence and work the association was instrumental in the planting of at least 1,500 trees in the city last spring. The work of the coming year will be along the lately improved thoroughfares. The planting of trees will be urged, especially by committees that will be appointed to operate on various avenues.

* * *

The removal or transplanting of large trees is now common practice, and is so well understood that few losses occur. *Meehan's Monthly* gives the following note on the subject: American tree planters find no difficulty in moving large trees. Trees up to three feet in circumference, are frequently moved, and generally with great success. The *Gardeners' Chronicle*

reports the removal of a large Purple Beech, which was 40 feet high and 6 feet 3 inches in girth at 4 feet from the ground. The tree was moved in 1880, and is still growing vigorously.

* * *

A writer in the Indianapolis *News* calls attention to the injury often occurring to the limbs of the soft maple shade trees by the accumulations of ice and snow thereon in the winter. The load is too much for their strength, and he quotes from an Arbor Day address of Dr. J. T. Rothrock at Lancaster, Pa., as follows: "Do not plant the silver maple. It is too weak to support its own enormous growth. It must be cut back. This opens the way for decay, and just when your tree should be in its prime it is in a stage of decay." This is verified in many of the cities and villages.

* * *

Plans for the improvement of Audubon Park, New Orleans, have been asked by the authorities of that city from Mr. J. C. Olmsted and Mr. Warren H. Manning of Boston. Both gentlemen have been on the ground examining the conditions to be studied. Audubon park is a tract of great natural beauty and the trees are exceptionally fine, an avenue of oaks commanding deep admiration. Audubon Park lies on the river and offers opportunities for a splendid development, a fact which has inspired the city authorities to seek the best professional advice on the proposed work. While there is abundance of material for the ornamental features on the grounds, the natural conditions prevailing at New Orleans, makes the work one of much interest.

* * *

A great work is in progress in Schenley Park, Pittsburg, in the way of planting groves. In many parts of the park very little more than grass is grown, owing to red clay and rock underlying a thin stratum of soil, and in order to permanently secure tree growth a hole of sufficient size and depth is sunk for each tree. This involves costly labor, but the proper development of the park demands it. Mr. Falconer, the superintendent, is proceeding in the work on lines which will make Schenley Park of wide reputation, and he is moreover giving his aid in every possible way to educate the people up to the value and utility of the park from all aspects of the question. Some 20,000 trees and flowering shrubs will have been added to the park before next summer.

* * *

The trustees of the Phebe A. Hearst architectural plan for the development of the University of California at Berkeley have issued invitations to the architects of the world to co-operate "in the preparation of a permanent general plan of the buildings and grounds which are to compose the University of California." The competition is to be double, a preliminary and final. The preliminary is open to the world. The final will be limited to those whose work in the preliminary is adjudged meritorious. All plans for the preliminary competition should be deposited with the United States Consul at Antwerp, Belgium, before July 1, 1898. At least ten plans will be retained, and if only that number the author of each will receive \$1,500. If not exceeding fifteen plans are retained \$1,200 will be paid each, and if more than fifteen are retained \$1,000 will be paid each. In the final competition those who desire to study the site of the proposed buildings on the ground will be provided with transportation and expenses from their residences to San Francisco and return. A total sum of at least \$20,000 will be devoted to premiums for the best plans in the final competition, and of this at least \$8,000 will be awarded to the plan classed as No. 1. The jury for the preliminary competition will be international, being composed of R. Norman Shaw, London; J. L. Pascal, Paris; Paul Wallot, Dresden; Walter Cook, New York; J. B. Reinsteine, San Francisco. For the final competition four architects will be added to the jury.

PARK AND CEMETERY.

CEMETERY NOTES.

The Village Improvement Society of South Coventry, Conn., has been devoting some attention to the Nathan Hale Cemetery, and has erected a granite wall on its frontage.

* * *

The Oak Hill Cemetery Association, Southington, Conn., will have an incentive to continue their good work of improving the grounds, in the gift of a handsome fountain by Mr. Merrit N. Woodruff, one of its directors.

* * *

The City Council of Ashtabula, O., has passed an ordinance looking to the improvement of the old cemetery property on Division street. A monument is to be erected near its centre and the future will know it as Memorial Park.

* * *

The reports of the president, secretary and treasurer of the Massachusetts Cremation Society, recently presented at its annual meeting, showed the society to be in a prosperous condition. Its expenses last year were about \$4,000, and there is a small balance in the treasury. The number of cremations the past year was 160, against 137 the year before.

* * *

The following is worthy of record: The City Council of Visalia, Cal., recently passed the following resolution: "That the Common Council give to the Ladies' Improvement Society of Visalia full charge and control of the city cemetery, with power to employ and discharge the sexton and such other help as may be necessary to keep the said cemetery in good order, and that they be allowed from the city general fund the sum of \$50 per month, to take effect January 1, 1898."

* * *

Extensive improvement is underway at Lakeview cemetery, Cleveland, O., notably a new stone office building, of pleasing design, and with the latest arrangements for the care and comfort of those for whose use it is intended. The cost of the building will be over \$6,000. With the changes and additions in the landscape work about the entrance, on which a large sum is being expended, a great change will have been effected in the appearance of the approach to Lakeview. The trustees are realizing that modern ideas are productive of good results, and are giving much attention to landscape improvement.

* * *

The following notice on the subject of Sunday funerals has been issued to the rectors and pastors of the Catholic parishes in the diocese of Cleveland, O., by order of the Bishop. It is a great step in the right direction. "From and after January 1, 1898, Sunday funerals will be prohibited in the diocese of Cleveland, except in case of extreme necessity, to which fact the priest issuing the burial permit will certify by letter to the sexton, or superintendent, of the cemetery in which interment is to be made. If by reason of death from contagious disease it is necessary to permit an interment on Sunday, only a hearse, or wagon, and not more than three carriages, or other vehicles, will be allowed to enter the cemetery. The reverend rectors and pastors, as also those having immediate charge of Catholic cemeteries, will be governed by the above regulation in regard to burial permits and funerals."

* * *

An article in another column on the legal side of removing bodies from graves without either due process of law or the consent of those immediately interested, should receive the attention of cemetery officials. Many suits are cropping up over the country on account of removals, and it may be remarked that such vital questions hinge about the sanctity of the grave, recog-

nized in all ages, that nothing but the majesty of the law or proprietary rights in the remains protected by such law have any right to desecrate the grave. It behooves cemetery officials, notwithstanding, by-laws, rules, regulations, etc., to be very careful concerning their actions in respect to the removal of bodies once buried. A suit was begun last month for \$5,000 against the Wesleyan Cemetery Association, Cincinnati, O., for the removal of the body of a man whose wife, since married again, paid a regular tribute of decoration on the grave of her former husband. The last visit found the body removed, said to be at the instance of relatives of the deceased, who were displeased at the second marriage. But the cemetery officials can have little defense on that score.

* * *

A lovely spot in Colorado is Riverside Cemetery, situated on the banks of the Platte, three and one-half miles from the Union Depot, Denver, Colo. It was originally laid out in 1876 by the Riverside Cemetery Association on 160 acres of land. It was incorporated April 1, 1876. The first interment was made June 1, 1876. The cemetery now embraces 225 acres, and contains about 20,000 graves. It is the oldest improved burial ground in the State. The grounds have been carefully and judiciously kept and cultivated and improved yearly. Although the location is below the city, the cemetery is on an upland, following the trend of the river, which passes along its northern boundary line. The natural drainage, therefore, can never become objectionable to the city, and the increasing population of the city cannot encroach upon it, for the reason that the river is upon one side of it, and the railroad upon the other. Among the 20,000 people who have been interred at Riverside are many of the pioneers of the State and city, and a large number of most distinguished men and women. The cemetery contains a great number of good monuments.

* * *

Speaking of the cemeteries which by act of legislature have come under city control in Boston, the mayor of that city in his recent address says: "The most important general need of this department is the erection of a suitable chapel at Mount Hope Cemetery," and he has recommended an outlay of \$25,000. The want of a chapel at Mount Hope seriously handicaps the trustees in competing, in the sale of lots, in competition with cemeteries in private hands. "The cemetery trustees also announced that a sufficient sum be provided to put the older cemeteries into safe condition, so that they can be thrown open to the public. Owing to the fact that formerly the covering of graves was made of planking, and that this has very generally decayed, it is not considered safe to open these cemeteries until the various graves have been examined and put in condition to insure the safety of visitors. It would be desirable, at least, to try the experiment of placing one or two of the older cemeteries in proper condition and throwing them open to the public. In the city of London many of the older cemeteries have been successfully treated so as to afford an addition to the public grounds of the city."

* * *

An interesting feature in the ancient cemetery at Passy, a suburb of Paris, France, is the tomb of that gifted girl Marie Bashkirtseff. It is said to be the finest private tomb in Paris. It is in the form of a Russian Chapel, its dome and spire rising some 60 or 70 feet from the ground. Its wide entrance is guarded by a grated door, through which a museum of mementoes,—the implements of the artist from her workshop—may be seen. A bust of Marie by an eminent French sculptor stands on a pedestal at one side of the chapel. On the wall over a small altar facing the entrance is a large canvas—an unfinished work of the deceased. In the crypt below, enclosed in a beautiful sarcophagus designed by a brother of Bastien-Lepage, repose the remains of Marie. He was a lover of the girl and died 40 days after her.

Very emotional inscriptions, written by noted Frenchmen, are placed in plain sight. Passy is a historical spot, with considerable interest for Americans. Near the cemetery, in one of the quaintest streets, is a house bearing a tablet recently placed by the Passy Historical Society, stating that there lived Benjamin Franklin, minister from the United States, and that there was erected by him the first lightning rod ever raised in France.

* * *

Governor Taylor of Tennessee advocates the organization of a Confederate Cemetery Association for the entire south for the purpose of raising money and caring for the Confederate cemeteries, many of which are in a dilapidated condition. It is reported that the Governor has agreed to deliver a number of lectures for the benefit of the cause.

* * *

Queen Victoria has placed a tribute at the grave of an old servant, Mrs. McDonald, in Crathie Churchyard, Scotland. It consists of two handsome slabs of red Peterhead granite, on the top of which is carved an interlaced Celtic cross. Appropriate inscriptions are cut in raised polished letters. Mrs. McDonald was in the queen's service forty one years.

Many of our exchanges are calling attention to the rapid destruction of those classes of trees used for Christmas exercises in deference to the old custom. It has been noted in many localities the past holiday season that Christmas trees were scarcer and dearer. When will the American people awake to the disastrous consequences of this continual destruction of tree life. Make it compulsory to plant a tree when one is destroyed and a remedy offers itself.

Experiences of a Public Spirited Citizen.

Speaking of the removal of two granite fountains, in Boston, to other locations, these two being part of a gift of six fountains made to the city in 1885, the Boston *Transcript* relates the following experiences of this philanthropist: "The donor of these fountains has had some queer experiences in his attempts to give like benefits to other places. He has business interests in a western city of large size, and, as he realized the need there of public drinking fountains, he went some time ago to the mayor of that city to make a formal offer of a gift of nine such fountains. The mayor was more than surprised, and had a long interview with the would be benefactor, during which he tried to discover his object in making the gift. He failed to be impressed by the simple statement that, beyond filling the public need of just such fountains, there was no motive to prompt the offer. The mayor was incredulous, and the generous offer was thought to be the harmless work of a crank. Indeed, the Boston man who made the offer of the gift afterwards heard that the mayor had spoken of his "interview with a crank" to those whom he consulted regarding the matter. It was only after considerable persuasion and exercise of diplomacy that his gift of nine fountains was accepted. They have been in position for some time now. In another instance the same benefactor noted the need of street signs in a town which he from time to time visited. He offered to furnish free several hundred of these, made of iron, and had difficulty in making the gift acceptable. Even after this was brought about, it was a long time before the town would stir itself to the point of placing the signs in position. He once gave a small library to a town which had none, feeling that it would be an excellent nucleus from which to build up a better library. The town accepted the books with some misgivings as to his sanity, apparently, so unusual did it seem to the town fathers to have a stranger interested enough in their welfare to make so generous a gift. The books, by the way, were placed in a room set apart for them, and then were practically let severely alone by the people of the town, who failed to realize the intended kindness to them."

CORRESPONDENCE.

Keeping Up to the Times.

Editor Park and Cemetery,

DEAR SIR: I notice by the December number of PARK AND CEMETERY that Brother Craig will try to make the Omaha convention a grand success. Whoever attends the next convention will see much and learn much, so let us hope that nothing will prevent every member from being present. We have all settled down to work since the meeting at Cincinnati much pleased with what we saw and learned and the many hospitalities extended to us, but many absent members we should like to have met. Brother Thorn, one of our new members, informs me that he is making improvements in his cemetery in the way of lowering corner posts, so that he has already begun to reap the benefits of our association. Brother Judson tells me that the Catholic clergy are making rapid strides towards the stopping of Sunday funerals, or at least stopping Sunday burials.

President Creesy and myself paid a visit to Forest Hills Cemetery, Boston, a week or two since. We missed Mr. Barker's familiar face, and did not see the new superintendent, Mr. Hargrave, as he was away. Mr. Wescott, who has charge of the floral department, took us in charge. His greenhouses are well worth a visit. Some eight or ten hands are employed, and everything is neatness. There are no sickly looking plants. Every house bears evidence of trained supervision. The entrance to Forest Hills Cemetery is second to none in the country, and the appearance of the grounds is in keeping with our leading cemetery practice. These winter months give us plenty of time to think and many changes suggest themselves, some of them, of course, trivial, but nevertheless worthy of notice. We should all aspire to make our grounds look a little better each succeeding year, and if we can make an improvement in ourselves let us do it.

I learn that Brother Eurich is about to make a change. It is not necessary to say that the best wishes of all of us will go with him to his new field of duty.

Hoping to read several communications from the brothers in the January number, I wish you all a Happy New Year.

William Stone.

* * *

FRANKLIN, PA.

Editor Park and Cemetery,

DEAR SIR: Each monthly issue as it comes to my office brings me much that is beneficial to me in my work, while only those of us who were not present in Cincinnati can tell how much our absence cost us.

Whether we have a meeting with the undertakers at Omaha or otherwise, would it not be well, if possible, for Mr. Craig to arrange for a corner for pictures and photographs in some room in the Exposition buildings? In regard to the trip to the Yellowstone Park, I think the superintendents will, no doubt, make a great effort to include it in their holiday.

Speaking of Sunday funerals, we seldom have them now, thanks to the Association of American Cemetery Superintendents, but if our president had been here one Sunday in November last he would have found me very busy. On that particular day I had three large funerals on my hands, and it was singular. All had been brought from a distance, and could not be put off.

I appreciate the chapters on "Garden Plants and Their Geography." I have been on the School Board of a large township for nine years, and botany is taught in every grade; orally in the primary rooms, and from text books in the higher grades. I have made use of some portions in my talks, and it seemed to interest the pupils very much.

C. D. Phipps,

Superintendent of Cemetery.

Association of American Cemetery Superintendents.

G. W. CREEZY, "Harmony Grove," Salem, Mass., President.
ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., Vice-President.
F. EURICH, Woodlawn, Toledo, O., Secretary and Treasurer.

The Twelfth Annual Convention will be held the coming fall at Omaha, Neb.

The Park and Out-Door Art Association.

JOHN B. CASTLEMAN, Louisville, Ky., President,
L. E. HOLDEN, Cleveland, O., Vice-President.
WARREN H. MANNING, Tremont Building, Boston, Mass., Secy. and Treas.

The next meeting of the Association will be held at Minneapolis, Minn., June 23, 1898.

Publishers' Department

Park Commissioners and Cemetery trustees are requested to send us copies of their reports.

Photographs and descriptive sketches of interesting features in parks and cemeteries are solicited from our readers.

Mr. Willis N. Rudd, Superintendent of Mt. Greenwood cemetery and secretary of the Chicago Horticultural Society, is now editor of *The American Florist*, in which capacity he succeeds Mr. G. L. Grant, who has started a new journal in the same field, called *The Florists' Review*.

Sunday Funerals.

Mr. J. C. Dix, superintendent and secretary of the Riverside Cemetery, Cleveland, O., is working to the end of obtaining the consent of the trustees to a change in the rules of that cemetery, whereby further interments on Sunday will be prevented, and all bodies, not dying of a contagious disease, brought to the cemetery on that day, shall be placed in the public vault; and in the event of the body being buried on the following day, in that case the use of the vault to be free of charge. Mr. Dix would like to hear from superintendents who may know of, or who have tried such a rule, as to their experience of its workings.

"Garden and Forest."

The discontinuance of such an ably edited and every way worthy publication as *Garden and Forest* at the close of its tenth year, for lack of proper support is, to say the least, exceedingly to be regretted. Conducted on the highest plane of dignified journalism, an ardent advocate of all that was elevating in landscape and municipal art, and an undisputed authority on forestry and horticulture, it commanded the admiration of lovers of the causes it espoused, and should have received the compensation it deserved. Prof Sargent and his co-workers on *Garden and Forest* may be congratulated on the good work accomplished by their efforts. The people have been shown in a manner becom-

ing the object desired that there is a vast amount of necessary and valuable knowledge in the study and practical use of the plant life, so lavishly offered at nature's hand.

Mr. S. P. Clayton, Supt., of St. John Rural cemetery, St. John, N. B., was the recipient of an address and Xmas gift of fur head gear, gauntlets, etc., presented by the employees, lot owners, funeral directors, etc., who thus signified their appreciation of his personality and efforts in behalf of the cemetery. The improvement in this burial place, due to the efforts of the president, Mr. J. W. Ruel, and his superintendent have been most marked.

A late issue of the *Embalmers Monthly* contains an editorial touching the conventions of the American Association of Cemetery Superintendents and the National Association of Funeral Directors which are proposed to be held at the same time at Omaha this year, and to be followed by a joint trip to the Yellowstone Park. The Society of American Florists may also hold its annual convention at the same time. During the meetings it has been suggested that a joint session to discuss matters of mutual interest would be valuable.

The annual meeting of the Illinois State Horticultural Society was held at Springfield, Ill., December 28-30, 1897. Among the papers read were: "The Value of Cow Peas as a Fertilizer," "Soil Management of Orchards," "Pruning of Orchards," "Potato Culture," "Small Fruits on the Farm," "Cultivation and Care of Bearing Orchards," "Co-operative Shipping of Fruits," "The San Jose Scale and Other Insects in Illinois," "How to Convert Inferior Products of the Orchard Into Paying Products," "Woman's Life on the Farm," "Better Foods and Better Methods in Our Homes," "Spraying for Insect Pests and Fungii," "The Farmer's Garden," etc. Nearly 100 premiums were offered for fruits and vegetables. The secretary of the association is Henry M. Dunlop, Savoy, Ill.

The winter months afford an opportunity for work upon the cemetery records that are often neglected during the busier seasons in cemeteries where much of this work devolves upon one person. Nothing is more important in the affairs of a well conducted cemetery than a comprehensive set of records and in fact no cemetery is too insignificant to treat the records with indifference. The system of records introduced some years ago by the publisher of PARK AND CEMETERY have been adopted in several hundred cemeteries and are very highly endorsed. Specimen pages of the Record of Interments and Lot Book will be sent on application to R. J. Haight, Chicago.

The first report of the Park and Out-Door Art Association, has just come to hand. It contains a full account of the Proceedings of the Association at its first convention held in Louisville, Ky., May 20th. and 21st. of last year, of which a report was given in these columns. The first meeting showed a remarkable unanimity of sentiment on the advisability of organizing such an association, and the attendance included many of the most prominent landscape and park authorities in the country. The papers, read at the meeting, are published in full and include:

"The True Purpose of a Large Public Park," by John C. Olmsted, Brookline, Mass.; "The Use and Management of Public Parks," by Andrew Cowan, Louisville, Ky.; "Water Garden Decorations," by James Gurney, St. Louis, Mo.; "Park and Municipal Art," by Harry W. Jones, Minneapolis, Minn.; "Rural Parks in a Prairie State," by Thomas H. Macbride, Iowa City, Ia.; "Parks as Investments and Educators," by L. E. Holden, Cleveland, O.; "Park Design and Park Planting," by Warren H. Manning, Boston, Mass.; "Ornamental Planting for Public Parks and Grounds," by Wm. S. Egerton, Albany, N. Y.; "The Metropolitan Park System of Boston," by Wm. T. Pierce, Boston, Mass.; "Park Development in the City of New Orleans," by Lewis Johnson, New Orleans, La. All details relating to the formation of so important an association were carefully considered and are given in the report, as well as discussions of the papers and the motions adopted looking to the permanent establishment of the organization and its next convention to be held in Minneapolis, Minn., in June.

This year marks the sixtieth anniversary of the establishment of the well-known enterprise of Henry A. Dreer, Philadelphia, and it is signalized by the distribution of a prettily designed and illustrated pamphlet, giving the history of the concern, which is full of interest as showing what persistent energy in a well chosen line of work will accomplish. The handsome and voluminous catalogue of seeds, plants, and other features of this immense business, accompany the above brochure, and the combination invites a study of their contents.

RECEIVED.

"A short talk about Modern Cemeteries." A folder containing map, prices and other information by Woodside Cemetery Association, Middletown, O.

We are indebted to Mr. Sid. J. Hare, superintendent of Forest Hills cemetery, Kansas City, Mo., for an interesting collection of photographs, and matter connected with his cemetery, which we shall make use of at an early date.

From R. G. Rau, superintendent, sheet of views of Krug Park, St. Joseph, Mo.

From Department of Publicity, Omaha, Neb., large plate containing birds eye view of the Trans-Mississippi and International Exposition, and the principal buildings in course of erection. The exposition will open in June next and continue until November. Also illustrated and descriptive pamphlet, containing a large amount of statistics concerning the exposition and the city of Omaha.

From E. A. Moulton, superintendent Blossom Hill cemetery, Concord, N. H., photographs of the White mausoleum and a handsome view of the landscape in that cemetery.

Rev. Newton M. Mann of Omaha, Neb., is the author of an interesting discourse entitled, Kindness to Animals in the Christian World, the evolution of a sentiment. It was written in response to a request by the American Humane Association for an occasional sermon on Kindness to Animals. H. S. Mann, Omaha, will supply the pamphlet at 5 cents a copy or 25 cents a dozen.

PARK AND CEMETERY.

Devoted to Art Out-of-Doors,—Parks, Cemeteries, Town and Village Improvements.

R. J. HAIGHT, Publisher,
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CONTENTS.

EDITORIAL—PARKS AND POLITICS—OUTDOOR IMPROVEMENT—	
PROGRESS OF PARK DEVELOPMENT—APPROPRIATENESS OF	
MONUMENT SITES.....	263
RESIDENCE STREETS, VI.....	264
THE ONONDAGA, N. Y., COUNTY CEMETERY ASSOCIA-	
TION.....	265
*A FEATURE OF PARK DEVELOPMENT, CAMBRIDGE,	
MASS.....	266
*WAYSIDE PLANTING.....	268
*FOREST HILL CEMETERY, KANSAS CITY, MO.....	268
*CHRYSANTHEMUM DISPLAY, FAIRMOUNT PARK, PHIL-	
ADELPHIA, PA	272
RAPIDITY OF GROWTH IN OAKS ..	272
*GARDEN PLANTS—THEIR GEOGRAPHY, XXVI.....	274
*THE HERCULES BRIDGE, BERLIN.....	276
*A CROSS MONUMENT.....	277
*A FOLIAGE AND FLOWER BED.....	278
PARK NOTES.....	279
CEMETERY NOTES.....	280
CEMETERY REPORTS.....	281
PUBLISHERS' DEPARTMENT.....	282

*Illustrated.

THREE can be nothing more detrimental to park development, looking at it from the aesthetic standpoint, from which point it is quite proper to consider it, than the interference of politics. While we may not have reached that condition wherein the appointive power of park commissions is disinterested enough, or is independent enough, to ignore party lines, yet there should be sufficient intelligence to understand that park development, from its very nature and purpose, will insist upon undivided attention and that of the highest character, for good results, or will quickly esent the infraction of true service. No service is more exacting, while none yields more satisfaction; but that service demands the highest order of intelligence, with profound knowledge in certain

lines of information, and the devotion which an undivided love for the work engenders. The people should insist, peremptorily and absolutely, that no political considerations should be allowed to interfere with their park affairs, and should visit with effective force officials, high or low, whose ignorance or cupidity, or both, leads them to trespass upon such assured prerogatives. Cases in point which prompt these remarks, are charges recently made in the Department of Parks, of New York City, and that of Patterson, N. J., both of which are directly traceable to political interference. The Patterson matter is a particularly glaring offense, and is calling forth loud denunciations. There must be no compromise. Park and cemetery control must be absolutely divorced from the destructive influences of selfish partisanship.

IT is gratifying to note the growth of effort to improve out-of-door conditions, such as the formation of Cemetery Improvement Associations, Village Improvement Societies, and the like, which are springing up in localities so far apart in the country, that it may well be believed that the movement is due, not to any local revival of interest, but to a widespread appreciation of the benefits to be realized. The devoted efforts of the past few years, to educate the people to the opportunities which lay ready at hand to improve their surroundings, are bearing fruit, and the result will soon surely be that our homes and villages will call for as much comment on their attractive condition as they do now on their crude appearance. The season is now at hand for beginning the practical work of the year; the winter should have witnessed a careful study of the situation, what were best to be done, what might be needed, and what amount of work might probably be accomplished with the prospective means under control. It is time all these preliminaries had been accomplished, and orders sent in for the necessary materials for the work. In our northern latitudes the spring is so very short that but little time is left for actual work, and the preliminaries, to make any progress, must be settled before out-of-door labor can be undertaken. But the laggard ones or those who have been prevented from arranging for their out-of-door improvements, need not despair. Although there is much to do, nature is lavish both of mate-

rial and opportunity, and it may truly be said that some good work may be accomplished winter or summer, so long as there is interest in the work, and the proposed work is well matured in the mind of the worker.

THAT we are only in the beginning of an era of park improvement, the vast amount of work required and suggested and the broad extent of country to be treated, is positive evidence. But that a general awakening to the desirability of more parks and park area is in progress, is just as evident, from the information that offers itself from all parts of the country. It is not at all surprising. Just as soon as the advantages of any progressive step is made apparent, the genius of the American people very quickly grasps the import, and throughout the land there appears a simultaneous effort to promote the improvement. And it is already quite clearly demonstrated that park development, intelligently prosecuted from first to last, pays a large dividend in many more ways than that of mere money returns, which alone fully justify the cost. The transition in the crowded city, from its pent up conditions, unnatural altogether in relation to man's higher aspirations, to the delightful fragrance and freshness of a well planned park, cannot be gauged by any common standard of values. It has a pronounced bearing upon the two sides of man—his intellectual and physical natures, and finds its measure in the health records, in the social life, in the union of forces for the general welfare, and in the moral standing of the people. Impossible to estimate by figures, but nevertheless exerting its powerful influence in common with the other silent forces of nature, working to the good of man.

A QUESTION that has agitated the officials working on the New York soldiers' monument seems to be appropriateness of monument to site. Little attention has ever been paid to this most important phase of public monuments, although the parallelogram or square system of laying out our cities, with its tiresome monotony, adds emphasis to the question. It suggests more variety in design and character to offset the monotony of commercial arrangement, and that the commission adjudicating on a design should be thoroughly equipped to secure results that will grow in public commendation. This feature has not, however, entered into the New York question, for in that city the monotony is scarcely apparent. But the accepted design, taken in connection with the splendid site desired for the work, did not secure the unanimous conviction of the Art Commission. The value of the monument, its appearance, and perhaps other aspirations which the site called into play,

failed to meet the standard aimed at in the combination of site and work of art. The whole question appears to be in good hands. New York can well afford to leave such a matter in the hands of its Art Commission. It has much to redeem from an art standpoint, and it has opportunities in that direction not possessed by other cities.

RESIDENCE STREETS.—VI.

MATERIALS AND CONSTRUCTION.—*Continued.*

PLANTING.

Upon the planting will depend the artistic appearance and homelike character which a residence street should have. On each side of the street there are two strips of ground available for planting, which may be considered in connection with our general subject. One is a narrow piece of ground along the boundary of the street which is sometimes left vacant, and sometimes occupied by a fence, a wall, a hedge, or a belt of planting; the other is the ground between the sidewalk and the pavement, and, on the ordinary street will have a width of about ten feet. This width will be increased on those streets which have their boundaries eighty feet apart, a width often adopted for suburban streets.

Perhaps it will be well to think first of the boundaries. It has been quite the custom of late years to do away with fences in those places where stock is not allowed to run at large. I sympathize with this custom, as a fence is usually an unsightly object, but I believe that something should take its place. There should be some privacy about one's home, and the home should extend outside of the walls of the house. Considered from the resident's point of view, the street should usually be quite shut out of view, especially when he is strolling about his grounds. On the other hand, it is pleasant for those passing by to get a glimpse of what is beyond the street boundary. Walls and hedges are forbidding, since they give the street a shut-in appearance, an effect which is admissible at times but should not prevail everywhere. To me an irregular belt of planting made up mostly of shrubbery, furnishes the most satisfactory solution to the problem. Most of us can recall at least one man among our acquaintances, a man usually occupying some position of prominence or authority, who is so polite and courteous that we leave him in a happy frame of mind, feeling that we have been especially favored even though he has denied a request that we have made. The fence, the hedge, or the high wall, is the abrupt and somewhat disagreeable official who says, "stand back, or keep out." The irregular belt of planting, close to the sidewalk at one point, somewhat recessed at another;

in places reaching high and perhaps overshadowing portions of the street, or again dropping to allow looking over and getting a glimpse of what is beyond, serves the purpose of keeping out intruders, but does it in such a courteous way that no offense is given. Such a belt, living from year to year, covering itself with beautiful leaves and perhaps flowers each spring, extending its branches in a graceful untrimmed way, showing all its pleasing colors, which may be especially rich in autumn, and decorating itself with fruits which may be retained even in the winter time, is an object that adds interest to one's journey. The mere fact that it hides part of the home grounds, makes them seem all the more attractive even to the one in the street from whom a portion is hidden. If we were all content to look at beautiful objects and admire them without touching or attempting to destroy them, there would be scarcely any limit to the variety and beauty which such a boundary belt might have, but unfortunately we are not yet sufficiently civilized to enjoy the best things. Still, in every locality, there is quite a variety of plants that can be used with safety. Some persons will rob our beautiful native thorns, the sweet briars, and the Japan quinces of part of their delightful blossoms, but these plants are armed with so many thorns that they are seldom destroyed. Prickly ash and the various species of barberries, while graceful in habit and covered with charming foliage, do not usually test the cupidity of passers by. There are many hardy roses besides the sweet briars, which can be used to give variety to our boundary. Among other plants that can be used for this purpose are the buckthorn, the green brier, some of the sumachs, dogwoods and viburnums, blue beeches, ironwoods, and all those woody plants which, while attractive in leaf and habit, do not present too conspicuous flowers or fruit.

Such a boundary belt possesses many advantages aside from its pleasing appearance. It requires no trimming, and so is inexpensive; if one plant dies, the injury done is slight in comparison to a similar loss in a formal hedge; it forms part of the boundary of the land as well as a protection from the street, often it enlarges the home grounds in effect, while a fence or hedge would contract them.

O. C. Simonds.

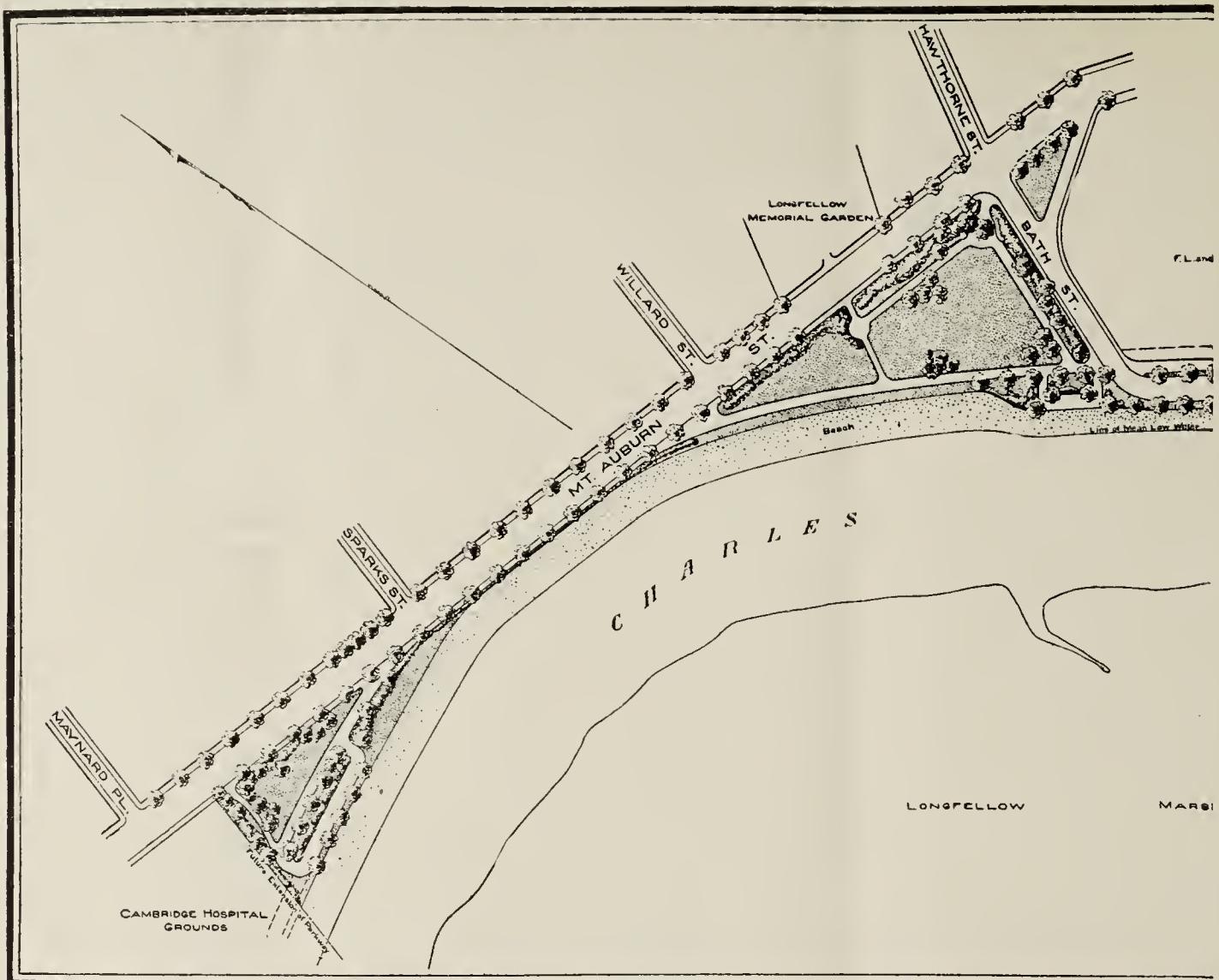
THE ONONDAGA, N. Y., COUNTY CEMETERY ASSOCIATION.

The Onondaga County Cemetery Association held its annual meeting last month at Syracuse, N. Y., and although the attendance was limited, much interest was manifested by those present. This association of county cemetery officials was organized August 27, 1895, with the following

stated objects: The preservation of printed and manuscript records of cemeteries in Onondaga County; the transferring of farm and neighborhood burying ground relics to larger cemeteries; the correct record of all past and future burials; the collection, use and preservation of a central cemetery library; the preservation of graves and memorials of pioneer settlers; the care of the graves and dissemination of information as to the best methods of organizing, caring for and improving cemeteries.

The report of the secretary showed that the association was making headway and gave promise of increasing usefulness as the years rolled along. The library was especially promising. The old officers were re-elected as follows: Jonathan Wyckoff, Onondaga, president; William Wilson Newman, South Onondaga, secretary; James Barnes, Syracuse, treasurer. B. C. Chaffee, Syracuse, Jonathan Wyckoff, Onondaga, Henry Kinney, Otisco, N. O. Hoyt, LaFayette, William Rice, Elbridge, and C. W. Allis, Skaneateles, vice-presidents. Luke Ranney, Elbridge, B. C. Chaffee, Syracuse, and L. S. Cleveland, Onondaga, legislative committee.

After the routine business the chief feature of the meeting was an address by Mr. J. H. Shepard, superintendent of Riverside Cemetery, Rochester, N. Y. Among much valuable and suggestive information he said: "The first cemeteries were crude and were simply necessities. They were located anywhere, and often on the poorest ground. No deeds were thought of. Somebody donated a strip of land and it was divided up among the settlers or given out piece by piece, as it was needed. At the present time the condition of European cemeteries is something terrible to contemplate. People are buried, sometimes, twelve and fifteen deep. The landscape effect never enters the minds of the Europeans. Beautifying cemeteries is simply an American idea. About the year 1850 the different States passed general cemetery laws, and since then the work has been going on." By the way of advice he added: "Don't leave mounds over graves. Don't have anything artificial but the monument, and the least of those the better. Headstones and corner-posts should be level with the lawn. Plant your trees in odd numbers, but plant some singly. Have your shrubs in masses, but keep each kind separate. Use the native shrubs. A large variety of trees or shrubs is not necessary. Don't plant too many evergreens. They are too sombre and melancholy looking. The perpetual care of graves is the only proper way to make a cemetery beautiful. Charge enough for the lots and guarantee perpetual care." He then told those from the rural sections how to go to work to get people interested and how to clean up their cemeteries.



A FEATURE OF PARK DEVELOPMENT, CAMBRIDGE, MASS.

The latest report of the Board of Park Commissioners of the city of Cambridge, Mass., like previous issues, affords an interesting and instructive view of the activity and resulting progress in the work of park development for an enlightened city, after it realizes the propriety and advantages to be secured, for old Cambridge has been a very conservative city. It is true that in its vicinity are to be found the most advanced practitioners in landscape designing and park work, and that no higher order of intelligence predominates anywhere than that which animates its society; still the amount of work necessary, and continued expenditure required, to efficiently carry out any complete system of "art out-of-doors" development, often tends to hinder projects of great importance.

Park work in Cambridge has been very varied in class, and consequently in style. From the Cambridge Field, designed to afford more or less physical recreation, summer and winter, for young and old, with incidentally a glimpse or two of landscape effect, to the public square and small park, the

schoolhouse yard, the beautiful river embankments and parkways, and the work of adopting the whole scheme to fit in some way to the Metropolitan Park system of Boston, involves a thorough appreciation of the demands of park work and the highest intelligence to meet and control the many questions offering themselves for solution.

The above diagram shows a plan of section G of the St. Charles River improvement, a portion of the improvement upon which most of the work of last year was concentrated. The effectual treatment of this section involved some engineering work to commence with, the area comprising considerable marshland to take care of and fill in, and to provide for several springs of water in the vicinity. The latter was accomplished by sinking two large dry wells, some ten feet in diameter, from which wooden pipes led the water into the river. No trouble has since been experienced from either water or settlement. All the necessities of street and boulevard improvement have been provided, and most of the planting carried out.

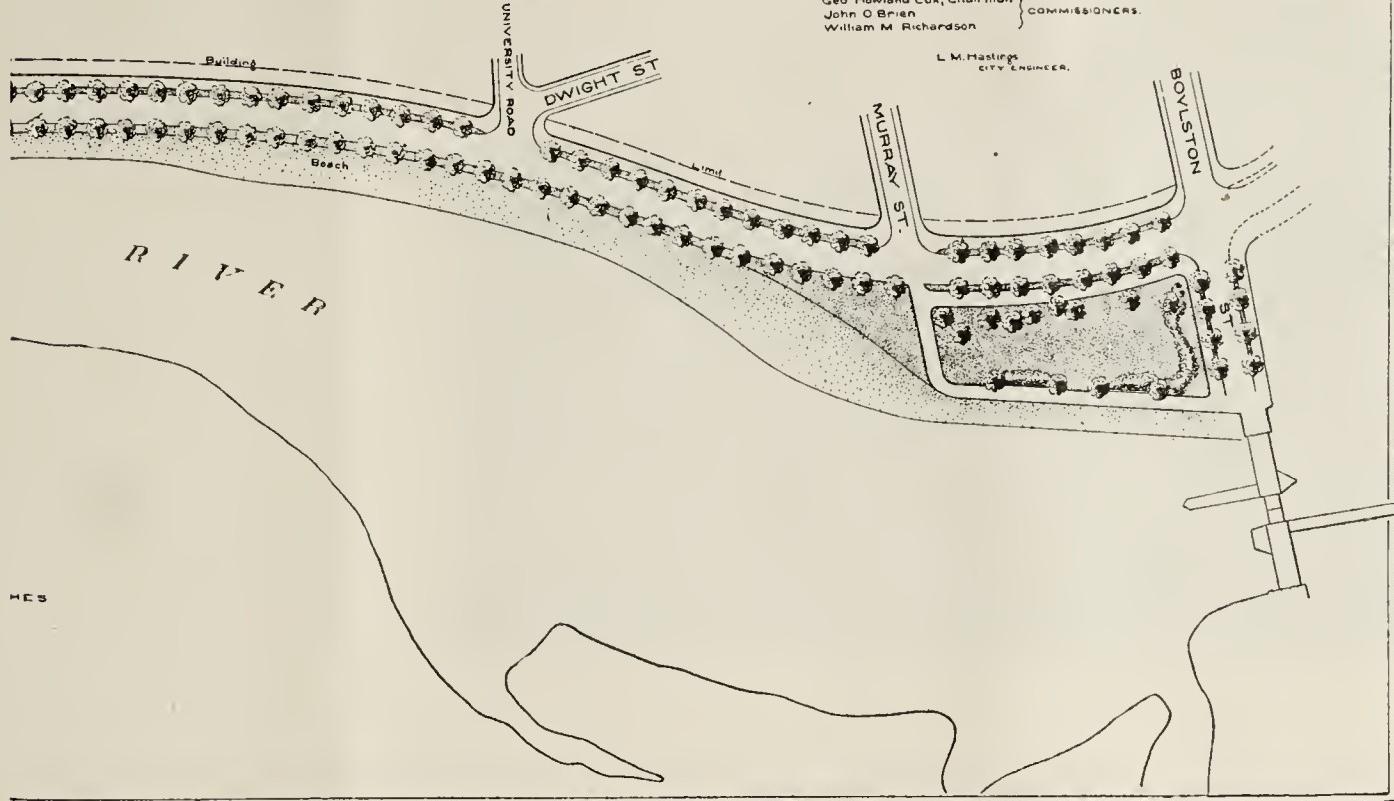
The construction work on this section G, since the commencement of the work, has cost \$95,573.50,

CITY OF CAMBRIDGE — PARK COMMISSION
CHARLES RIVER PARKWAY
 SECTION · G

BOVLSTON ST. TO CAMBRIDGE HOSPITAL

SCALES
10 100 200 300 400 500 FEET
10 60 120 180 240 300 METRESJ.C. Olmsted, Landscape Arch^t
Brookline, Mass.

1897.

Geo. Howland Cox, Chairman
John O'Brien
William M. Richardson } COMMISSIONERS.L. M. Hastings
CITY ENGINEER.

or about 16 cents per square foot. The cost of the land was \$80,651.08, or about 13 cents per square foot, making total cost to December 1st, the date of report, 29 cents per square foot. The area of section G is 602,966 square feet. The cost of construction was apportioned as follows: Filling, \$35,420.02; labor, \$22,836.74; loam, \$11,488.99; gravel, \$7,638.01; miscellaneous, \$18,189.74.

It is well to note the results obtained from this river work as applied to Cambridge, and which are summed up as follows:

1st. The general improvement in appearance—the making beautiful that which was disgraceful and abominable.

2d. The cleaning out of unwholesome and undesirable hovels, a constant menace not only to the health of those who lived in them, but through the conveyance of disease germs to the children in our schools.

3d. The increase in the values of abutting property, in some cases more than 400 per cent. The filling of marshes and bog holes, a work that never would have been done by private capital. The erection of new and expensive buildings, and

laying out of new streets, thus changing this former picture of desolation into one of beauty and usefulness.

4th. The effect it has had upon the State Commission, resulting in a plan to lay out the huge Lowell and Longfellow marshes, so that the Boston shore will correspond to that of Cambridge. The Metropolitan Commissioners have made the taking, and will begin at once the building of the shore drive, the dykes and the speedway, to be followed by other improvements.

It is unnecessary to suggest what will be the final result of these wise expenditures. As the report well says: A city well located on the sunny bank of a beautiful river, with wide, well-shaded streets, non-partisan government, freedom from saloons, the seat of the greatest university in the country, the one-time home of Longfellow, Holmes and Lowell, surrounded by historical associations—should be the ideal spot in which to build a home and educate one's children.

A beginning was made in the work of improving the schoolhouse grounds, by making lawns, planting borders and flower beds where appropriate,

WAYSIDE PLANTING.

The fascinating ways of such bits of natural grouping as these are worthy of critical consideration by every designer and planter.

One illustration shows wild roses taking possession of the wire fence bounding a railroad right of way. It shows only one small space, but there were



WILD ROSES.

a dozen such within the limit of a seven-mile ride. This ride was rather unconventional, possibly somewhat undignified, but wholly delightful, as well as practical, for the beautiful route traversed could only be reached in detail as we reached it, and that was by inducing the "section boss" to take us and the camera over it on his handcar, stopping where attractions proved irresistible, and then depositing us at the little flag station at the foot of the valley in time to get ourselves picked up by a train.

The other engraving gives an example that teems with suggestions. The Elder and Sumach, closely associated in the group, combine remarkably well, are presentable at all times, and furnish several distinct decorative effects at different seasons. The foliage of both is attractive; and nothing in field, wood or garden is lovelier than the creamy lace of Elder blossoms that are produced in lavish abundance, and with unvarying certainty each year; while

spikes of sumach berries are ornamental at every stage of their growth, and their final deep, rich, velvety red fitly completes the splendid face coloring of the entire shrub.

The group is well placed, too, merging into the larger growth back of it by nice gradations, and advancing in the front to break stiffness of outline.

The foreground, closely carpeted with fennel, is a good lesson in planting in that it suggests the use of suitable herbaceous material for merging plantations into lawns at certain points instead of allowing the sward to spread in an unbroken sweep quite up to the shrubbery on all sides.

And finally the mass of the group shields the trunk of the specimen tree that rises in the open space just back of it.

The entire bit of planting if transported to a park might fitly take its place as part of a finished design in naturalistic planting.

It is said to be a poor rule that fails to work both ways, but not every park con-

tains a plantation of equal size that could be set down in any any wildwood and seem equally at home.



ELDER AND SUMACH.

Fanny Copley Seavey.

FOREST HILL CEMETERY, KANSAS CITY, MO.

From time to time in these columns there have been given illustrations and other matter concerning improvements contemplated and in progress in Forest Hill Cemetery, Kansas City, Mo. There are not many instances on record, although there are many in fact, where the development of rough and ordinary land has offered so many transformation scenes under vigorous and intelligent treatment as the cemetery under notice. Instances where a short season has entirely obliterated the crudeness of unkempt nature, where conditions have not been favorable, or the time not ripe, for the more finished efforts of her wild picture making, and in its place presented promises of landscape effects to refresh and inspire in the near future.

Some notes in connection with Forest Hill Cemetery will be of interest. The cemetery was started in 1888, and its establishment was due to a growing idea that a burial place was needed far enough away from the rapidly increasing population of Kansas City as to secure its freedom from encroachment and to insure all the best conditions pertaining to the use and care of cemeteries serving the needs of large communities.

Another factor in its establishment was the experience of so many other cities, where frequent change and removal of the dead to points beyond city limits was a matter of history. This determined the company in the choice of land, and 320 acres of high rolling ground eight miles from the business portion of the city and four miles beyond the outer skirt of the residence district was selected.

This ground has a variation in level of 125 feet inside its boundaries, and is 200 feet above the business center of the city. It is so located that views in every direction, for miles around, may be had.

The plot was mostly farming land, with a few scattering forest trees remaining, and the landscape problem was not given consideration. Eighty acres were at once platted and maples and elms set in lines along the drives, giving long rows of trees and nothing else but shade.



LOWER TWIN LAKE AND PUBLIC RECEIVING VAULT.

The first company liquidated and a second association took hold and greatly changed the plans. A landscape architect was employed and thousands of trees and shrubs were purchased, with the object of bringing the grounds to the condition of the modern cemetery. The roads follow the natural contour of the land, giving easy grades from the low to the high ground. Over ten thousand trees and shrubs were planted on these eighty acres, and many more are to be added.

The past two years have witnessed many changes in the original plans. Vistas have been cut through where the maples and elms along the drives obstructed the view, while many more of these trees have been cut out or transplanted to break up the monotony of their lines. Others have been and will be taken out to be replaced by more ornamental trees, singly or in groups, so that before long the work of the first crude efforts at improvement will be obliterated.

Our readers will remember particularly the transformation scene given in the August issue of 1896, and it may be inferred from the above details that many



NYMPHEA LAKE.—NINETY DAYS AFTER EXCAVATION COMMENCED.

such changes have marked the progress of improvements; new roads have been completed, better grades secured and sharp corners reduced, all with a view of developing the property on the most advanced principles.

The rules of the company prohibit lot-owners from planting trees and shrubs, so that the landscape plans may not be deranged. Headmarkers are restricted to sixteen inches in height, which the superintendent remarks is far too high, and greatly mars the appearance of the grounds. The lots are all sold under a perpetual care clause.

Under the present superintendent great improvements have also been effected in the monumental work, both in material and design; granite being almost entirely used, for marble has proved itself unreliable in the climate of the locality. The close of 1897 showed 1,600 burials since the cemetery was opened.

Forest Hill Cemetery is the only cemetery in Kansas City now outside the city limits, and should have a successful future. No efforts are spared in the way of procuring and caring for material for landscape development and improvement. Everything new and tried in shrubbery and trees is added to the nursery yearly, and watched and cared for until ready for use. Another useful and interesting feature is to be added—all trees and shrubs will be labeled. The association employs a competent florist, and a conservatory is now in course of erection.

There are three private mausoleums and one public receiving vault on the grounds. The mausoleum of Mr. L. P. Brown is, in design, of purely Grecian order, and is constructed of Bedford, Ind., stone. It contains nine catacombs.

Dr. Joseph Feld's vault is constructed of Warrensburg, Mo., sandstone. It has no catacombs, the bodies being placed in pits below the floor line.

The Mortimer Dearing mausoleum, just completed and shown on opposite page, is said to be the most substantial structure of the kind built in the west. It is built of Barre granite, with marble interior and bronze trimmings, and cost \$7,000. The sides are planed and rubbed, giving it a very white appearance. Its construction comprises in all only twenty-three stones in the inclosure proper, all of very large dimensions. The foundation is 12 feet 6 inches by 17 feet, and it is 11 feet in height to the cornice. The roof is of one stone.

The interior finish is Italian marble, with pink Tennessee marble covers to catacombs and a base course of black serpentine marble. In the rear granite wall a window opening is cut, in which is set a colored glass window, protected from the outside by a heavy bronze grill. The inner doors are granite slabs, three inches thick, with heavy bronze handles on outside and a mortised lock of brass. The outer gates are of bronze. The floor is of decorated white vitrified tile, and the ceiling is one slab of Italian marble. The whole of the interior is very highly polished.

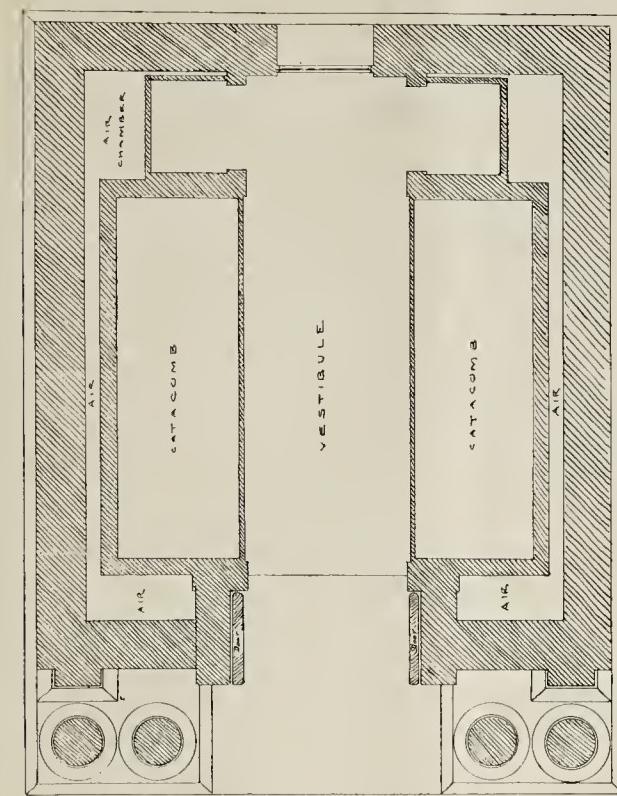
It will be observed by the illustration that the sides of this mausoleum are composed of three stones only; the base is three feet high, the wall stone six feet and the cornice one foot six inches. The corner projects about one foot, and on this the roof stone, twelve feet six inches by fifteen feet, rests.

This mausoleum was designed by Mr. James, architect, for Mr. M. H. Rice, contractor, Kansas City, Mo. It is neat and unpretentious, yet withal a most substantial and well-finished structure.

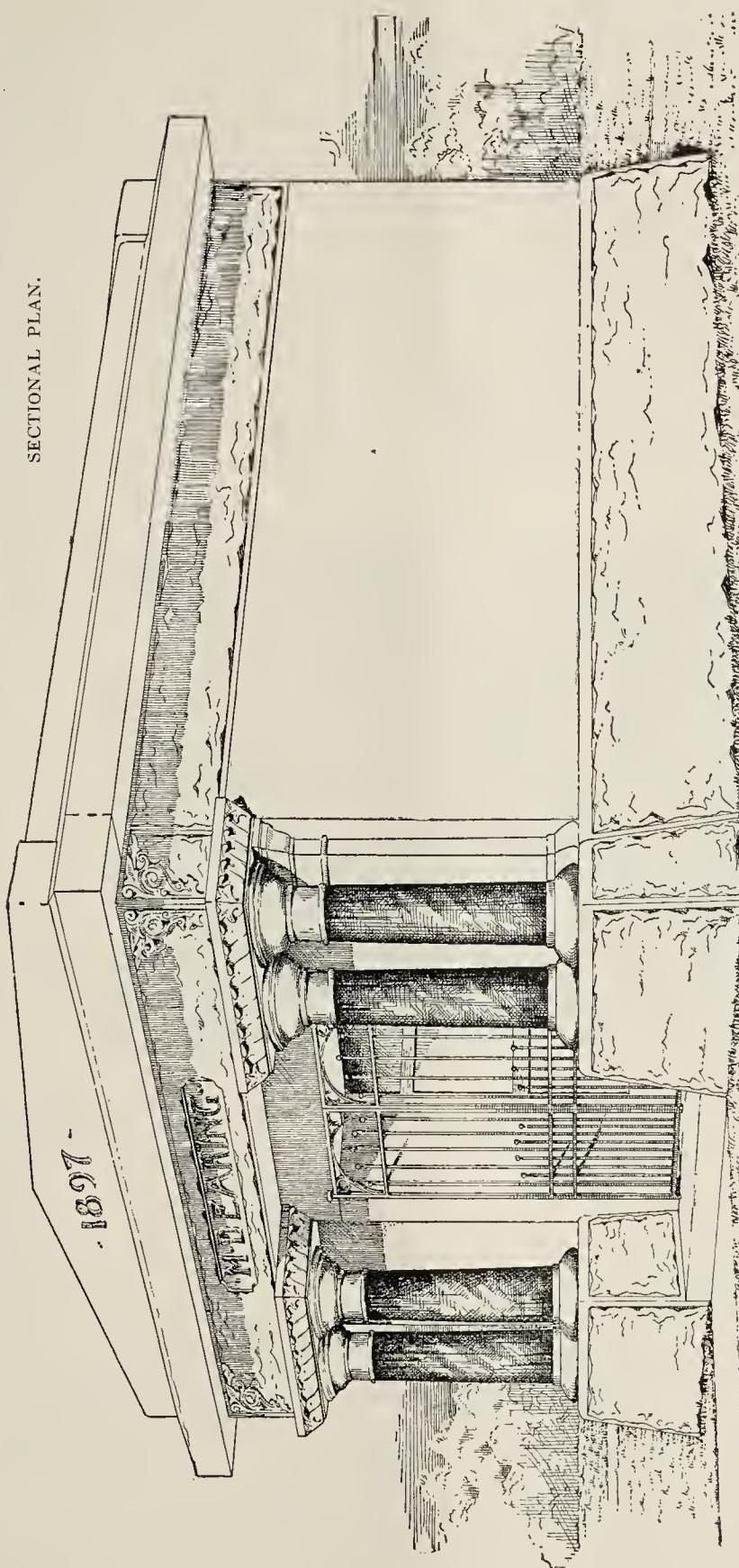


THE L. P. BROWN MAUSOLEUM.

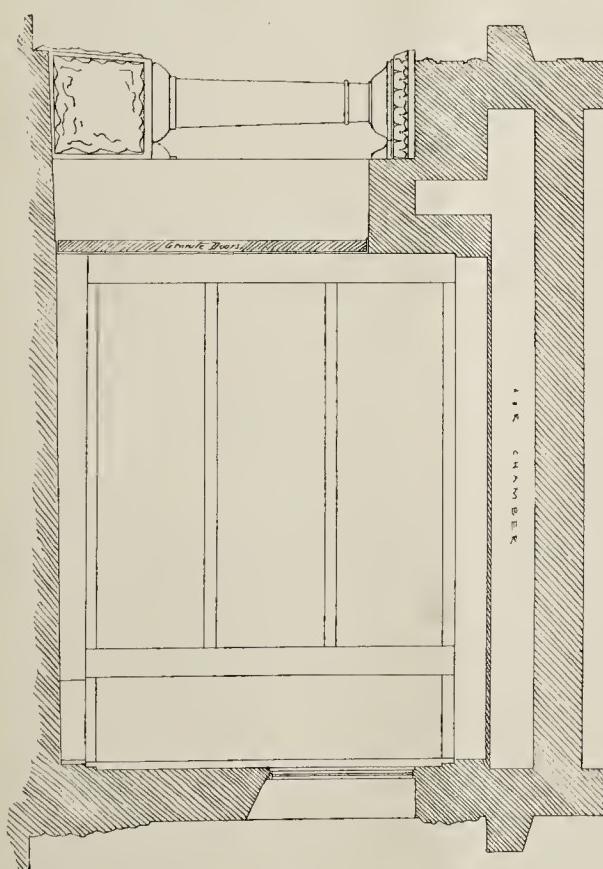
THE DR. JOSEPH FELD MAUSOLEUM.



SECTIONAL PLAN.



LONGITUDINAL SECTION.



To add to the general effect, the Dearing mausoleum is located on one of the high points of the cemetery, on a plot of ground containing fifteen lots, having a driveway entirely around it. It is to be planted out to obtain the best effects possible, with a view to permanent attractiveness.

The public vault of Forest Hill Cemetery is quite a large structure, having space enough within to allow of funeral exercises being held. It contains

eighty catacombs, and was designed and built in a manner to secure the best results of ventilation and dryness, two essential features for the well being of a public vault, both on the score of its own permanence and the safety of those using it for its intended purposes.

We are indebted to Mr. Sid. J. Hare, superintendent of Forest Hill Cemetery, for the material from which to present these details.

CHRYSANTHEMUM DISPLAY, FAIRMOUNT PARK,
PHILADELPHIA, PA.

The chrysanthemum is a plant which could not well be dispensed with, as it presents us with its attractive flowers at a season of the year when there is, practically, nothing else in bloom. There is such a great variety of colors among them that it affords the opportunity of making nice contrasts. Some of the most popular exhibits in the horticultural line are composed almost entirely of chrysanthemums nowadays. The superintendent of Horticultural Hall, Fairmount Park, does not aim to have immense plants, with immense heads of flowers, such as are seen in the halls where plants for competition are exhibited; but to grow a good as-



sortment of small-sized plants, to make a beautiful picture for the gratification of visitors, and in this, I think, he certainly succeeded the past season. Herewith is an illustration of a portion of the house in which the plants were arrayed, and it certainly is a pretty picture.

The vine which hangs down so prettily from the table, and which is so fittingly used as a facing to the chrysanthemum plants, is the large-leaved, variegated periwinkle, a vine largely used in greenhouses, and whether in positions as shown in the picture, in a pot, or a hanging basket, is always pretty. Though nearly always seen indoors, it is quite hardy; in this vicinity, at any rate.

The large-flowered chrysanthemum shown in the illustration, while not as hardy as the old-fashioned pompones, once so familiar in gardens, are fairly hardy with us. If well covered with leaves, they are all right. But growers nowadays prefer young plants to old ones, and florists who grow a few favorite sorts to sell cut flowers from universally use freshly rooted plants. The old plants are preserved through the winter under cover in any corner of the green-

house, where it is comparatively cool. About March or April the plants are placed on the stage, in the light, and watered and tended. In a short time quite a number of shoots spring up about the base of the old stem. These are cut off and placed in sand, in a gentle heat, and very soon make roots, and are in condition to be potted and start life on their own accounts. Where cut from the old plants, other shoots will push forth, and these in turn can be rooted. And if not enough are had in this way the tops of the young plants may be utilized, doing no injury whatever to the plants, as they have to be topped several times in the course of the season to make them bushy. As the young plants grow they must be shifted on from time to time to larger pots. When May comes, bringing warm, settled weather, place the plants out of doors, in the full sun, and see that they neither lack water nor manure. Old plants may be divided and made several of, and planted, just as they are, in the open ground.

Joseph McLean.

RAPIDITY OF GROWTH IN THE OAKS.

It has been protested time and again by those who know that the popular reputation of the oak as to slow growth and difficulty in transplanting is not necessarily a true one. A little care and proper treatment, it is said, make them as satisfactory to handle as cheaper looking trees of less beauty and greater spontaneity. For the past two or three years the writer has had the curiosity to look somewhat into the matter and see how true the popular prejudice was. The surpassing beauty of the oak is acknowledged, but their use as an ornament has been neglected, for the obvious reason that they have been thought not to succeed.

An inquiry into the rapidity of growth of the oaks was made. The universal statement was, that while oaks in their natural state do grow more slowly than many other trees, in cultivation and under proper treatment, they grow as rapidly as do they. Samuel Moon of Morrisville, Pa., has given me the benefit of his rich experience. "The oaks," he says, "are rapid growers. The pin oak is probably the fastest and in fifty years will outgrow silver maple, Carolina poplar, and most other cheap trees which are considered the fastest growers. The latter grow very rapidly when young but after a few years get tired and lose vigor. The oaks keep on growing vigorously much longer. I have a pin oak in my nursery fifty years old and nine feet five inches in circumference, a bur oak forty years old and six and one-fourth feet in circumference, a Swamp white oak of the same age, similar in all its measurements, and an English oak about thirty-five

years old, forty feet high and three feet seven inches in circumference. English gardeners tell me that my English oaks do better and are growing faster than they do in England. There, they are very slow to start. Here they are a desirable tree."

A number of other authorities have made the same declaration as to the rapidity of growth of oaks. Most important may be given the testimony of Thomas Meehan. "At one time the oaks had the reputation of being of slow growth. While this may be true of them in Europe, it is not so here. In our nursery they grow as fast as any other ordinary trees."

Some measurements were made at the Arnold Arboretum of a group of trees fifteen years old, all thrifty, planted at the same time, and growing under the same conditions. The heights appeared about the same except that the white oak was somewhat smaller, the ash much so, and the maple hollow. Their circumferences speak for themselves:

White Oak....22 inches.	Laurel Oak....23½ inches.
Chestnut Oak..17 "	White Birch....24 "
Bur Oak.....16 "	Ash.....11½ "
Pin Oak.....30 "	Chestnut21 "
	Sugar Maple....15 inches.

The oaks here seem to have grown fully as fast as the other trees and one, the pin oak, surpassed them all. Moreover, they were all sizeable trees, set not a very long time and abundantly large enough to be enjoyed. The popular impression that he who plants an oak plants only for posterity does not appear to be true here.

While the oak may grow rapidly enough under proper circumstances, two conditions presented themselves as essential, suitable treatment at and before transplanting, and proper preparation of the soil. The latter, of course, implies that sufficient plant-food is to be prepared in a thorough way to feed the young tree as it pushes upward. Perhaps the best statement as to how this may be accomplished came from John Boetcher of Oakwood cemetery, Troy, N. Y., whose trees prove that his faith is justified by his works. He says: "The oaks, like all other trees require about one and the same treatment. Prepare the ground by digging a hole about eight feet square and four feet deep. Turn the sub-soil in the bottom of the same, and fill in with the rest of the earth, mixed if too poor, with some better earth. No manure need be used, but the roots should be properly spread, and all broken parts carefully trimmed. The same rule may be applied to any tree-planting."

More important because less known is treatment in preparation for permanent setting. All oaks with the exception of the pin oak have one long tap-root which grows directly and deeply into the ground.

If this is cut off after having become of any size, the tree is maimed for life and deprived of its means of food-supply. The practice of nurserymen, where it does not seem best to plant the acorn where the tree is desired to stand, is to transplant the young oak when two years old, cutting off the tap-root as much as is necessary. This causes an additional growth of fibrous roots before the tree has become too old. The practise is continued frequently until the time comes to make a permanent setting. A large part of the ill-success in transplanting and setting oaks is said to be due to the failure to transplant the seedlings often enough in the nursery. The pin oak forms naturally a growth of fibrous roots to which is due in large measure its popularity because easily transplanted.

The popular prejudice against transplanting the oaks was found in part to have foundation. The oaks do grow slowly or fail utterly unless given the little more care in transplanting and setting that their worth demands. With proper cultivation of the soil and sufficient frequency in transplanting, they grow as rapidly as any tree. Their youthful beauty is charming. In old age they are grand. Beautiful at any time, they amply repay the little extra thought required by them.

A. Phelps Wyman.

It is remarkable that the ancient Greeks and Romans, especially the latter, appear to have known as much about propagating roses as the most successful growers of modern times. In the Old World the practice is to go into the woods, collect good strong plants of the Dog Rose, *Rosa canina*, plant them in the nursery, and then graft, or rather bud them, with kinds desired; and it seems that this was exactly the practice pursued by the ancient Romans. When we look at the many remaining works of the ancients in the various lines of human action we know that civilization must have been very much in the advance, even in those early times. When we talk, therefore, of civilization, it simply means that we have advanced in other lines than those which the ancients occupied.

* * *

Plant-growers well understand that when there is a change of the green color of leaves to variegation the leaf power seems weakened. Even hardy shrubs, when they are variegated, are always dwarfer, and grow in every way with less vigor than the plants with foliage of a normal color. Singularly enough, this is not the case with purple-leaved varieties. As a general rule they are much more vigorous than the green-leaved forms from which they have sprung. The reason for this is clear, but it would be a good subject for a thesis in some of our horticultural colleges.—*Meehan's Monthly for December.*

GARDEN PLANTS—THEIR GEOGRAPHY, XXVI.

UMBELLALES.

THE HYDROCOTYLE, ARALIA, AND CORNUS
ALLIANCE.

This is an extensive alliance of trees, shrubs, climbers and herbs, the latter generally coarse looking, although a few are admitted to gardens as ornamental plants. They are evergreen in the milder climates, mostly deciduous in colder regions and sparsely represented in the drier ones.

The umbel of flowers is a common characteristic, not confined to the alliance, however. The herb tribes known as "Umbelliferae" are especially abundant in the Northern Hemisphere, often in moist, or even wet places. Several are the most active vegetable poisons known. The "water hemlocks," of which there are several, have four or five forms in the United States, *Cicuta maculata* being one of the most widely distributed and dangerous, claiming its victims from among the children who mistake it for "Sweet Cicely." Emetics, such as mustard or olive oil, should be resorted to immediately by those who are thus unfortunate, for it kills—*sometimes* in half an hour. All the *wild* plants of these tribes should be treated with suspicion, because they resemble several culinary plants of the alliance, and are often mistaken for them. The Parsley, Celery, Parsnip, Cicely, etc., are all closely "mimicked" by extremely dangerous species.

Those who possess the older botanical books will sometimes find the "dogwoods" grouped with the "honeysuckles," and not with the Umbellales, and there is by no means an end to the arbitrary grouping of the doctors. The only help for the gardener is to refuse the doses. The framework of classification at any rate seems ample for all needs, and whimsical changes should be discouraged. Practical people want uniformity and consistency of meaning and expression, and such agreement in the plans of gardens devoted to instruction as will render confusion difficult, if not impossible.

Moreover, gardens are not established for the growth of weeds. A gardener's garden aims to illustrate botany, not by trash plants, but by all the



CICUTA MACULATA.
("Poison Hemlock.")

most elegant, thrifty and beautiful forms that can be secured. These may or may not be grouped lineally in agreement with the most approved scientific system, but whether they are or not, the utmost gracefulness of arrangement should be insisted upon. These papers were written to facilitate this, and render the selection of several distinct groups easy for gardeners—and botanists, too, if they choose.

Any disposition may be made, but the gardener of wide culture and experience will select those forms which lend themselves most freely to the gardenesque, and his training will tell him that the beauty of his garden will depend as much upon what he excludes as upon what he admits. The best planting is never that which includes the greatest number of unsuitable species.

The alliance under consideration is the last of the Polypetalous division, and it is not too much to say, in passing, that its beauties have never been brought out in any adequate manner.

The Ivies as a covering for the ground, or as climbers, are difficult to surpass. Yet, where can they be found represented in anything like perfection? I believe a group of them with the common green form as a groundwork, and studded with the best variegated varieties, would surprise 999 gardeners out of a thousand in any country, but the variety of form and subtlety of coloring is by no means confined to the Ivies. Nearly all the genera mentioned below contain forms which are remarkable for fine foliage effects, and in the hands of anyone skilled in grouping are capable of rich and naturalistic treatment, for the Ivies and dogwoods are commonly found in the shade of larger growths—supplied in this alliance by the very beautiful "tupelos." The Aralias are not easily surpassed, either for beautiful foliage or extraordinary panicles of bloom. The Fatsias, where they thrive, are hard to beat, and the variegated forms of the various species of dogwoods are among the best and most color-enduring in our climates. It is not a group eminent for its flowers; nevertheless, the involucral bracts of the dogwoods, ranging in color from yellow to white and pink, afford a fine display from spring to summer, and several Aralias, *Eryngiumis*, etc., will continue until September.

Hydrocotyle, "white rot," as it is called in England, has sixty species distributed over the temperate regions. The British plant affords a curious example of the misapplication of common plant names. It grows in the Fens and marshes, and as the sheep pastured on the lands before they were as well drained as now, became diseased, the plant was stigmatized instead of the rank soil. The scientific name signifies a water cup, because the leaves often retain water. Chiefly grown in botanic gardens.

Eryngium has 100 or so species well distributed over the temperate parts of the world, except South Africa and some of the islands. Sixteen or eighteen are natives of the United States. These are but little known at the north, however, but some of the best are in California parks and gardens. They vary a good deal in habit. In some the foliage has the aspect of bromeliads, and the inflorescence in colored bracteate umbelliferous heads. Some are prostrate with thin unarmed leaves, but those whose involucral bracts and upper branches are blue, such as *Amethystinum*, *Alpinum*, etc., are most highly prized by gardeners who desire unique effects in planting.

Astrantia has six species, natives of Europe and Western Asia. *A. major* and *A. minor* have variegated forms of considerable merit, and are well worth planting.

Molopospermum cicutarium is a monotypic European plant, grown for its fern-like ornamental foliage.

Conium, "poison hemlock," has two species, one of which is either native or introduced in all north temperate countries; the other is from the mountain regions in Africa. Socrates, it is said, took the poison of these plants.

Bupleurum has fifty or sixty descriptions and names. *B. fruticosum* and possibly some others of the evergreen kinds are grown in South European gardens, and would probably be tender north, but they are not particularly desirable. The common "hare's ear," a British herb, is naturalized in the States.

Apium as a genus is hardly worth mentioning, except for *A. graveolens tricolor*.

Ægopodiums also are weedy things, but the variegated variety of *Æ. Podagraria* is a useful plant, holding its color extremely well.

Athamanta, in two or three species, are European and Western Asiatic. *A. Mathioli* is kept in European gardens for its pretty foliage.

Fæniculum, "fennel," has three or four species, chiefly in Mediterranean countries and the Canaries. The common kind often establishes itself on balast ground from the Gulf northwards to Baltimore and Philadelphia.

Œnanthe has twenty or more species distributed over the northern hemisphere and in South Africa and Australia. *Œ. crocata*, one of the "water hemlocks," is very poisonous and dangerous, resembling celery, and growing wild in similar places. It does not appear to have naturalized in the United States, and it can well be spared.

Aciphylla, "bayonet plants," are a curious Australian and New Zealand genus of some twenty spe-

cies or so. They have sharp-pointed pinnate leaves and white flowers.

Angelica and *Archangelica* have between them some thirty-five species of no great merit, except that such as *Archangelica atro-purpurea* may be grown as foliage plants.

Ferula, "Asafœtida," has eighty species, all from countries bordering the Mediterranean. *F. gigantea*, grown for ornament, is of uncertain origin. It grows to a large size, and is a very striking object on a lawn. There are several others with fine, handsome foliage, such as *glauca* and its varieties.

Heracleum has sixty or more species in the northern hemisphere, and eight or ten of them are known in gardens where they form noble looking, but coarse plants, some of the species growing to eight or ten feet high and bearing enormous umbels of flowers. The British plant, *H. sphondylium*, is known as "Cow Parsnip." The North American one is *H. lanatum*.

Opopanax and *Malabaila* are Mediterranean genera for the most part, which may yield a garden plant or two to the milder portions of this country.

Aralia has thirty-three species of handsome trees, shrubs and herbs, natives of the tropical mountains and eastern parts of Asia, of Mexico and the United States. *A. chinensis* and its variet



AURALIA TRICIFOLIA.

canescens, are known under several confusing names. It bears considerable resemblance to the native *A. spinosa* (figured in PARK AND CEMETERY, 1897, p. 215), but generally flowers somewhat earlier. Both bear immense heads of whitish flowers during August-September. Of herbaceous kinds *A. cordata*, *A. racemosa* and its variety *sachalinensis*, and the Himalayan *A. Cachemirica* are in cultivation. *A.*

quinquefolia and trifolia are the names generally applied to the "Ginsengs," beloved "medicine" of the Chinese. They are not of much use ornamenteally, but have clusters of white flowers in early June. *A. Californica* and several others are natives, and a number of handsome sub-tropical forms do well in the southern parts of Florida and California.

Acanthopanax is in six or eight species, from tropical and eastern Asia. *A. ricinifolium* and *A. spinosum* (known as aralia pentaphylla) are in gardens.

Trenton, N. J.

James MacPherson.

THE HERCULES BRIDGE, BERLIN.

In gauging the artistic decoration of Berlin, it must be borne in mind that the city is, so far as being the reunited fatherland's capital and as being

structured of recent years. Some of these sculptures are notably fine, such as Hercules Bridge, situated in one of the most aristocratic quarters of the West End, but other bridges which are located in the poorer districts or in the business quarters such as Gertraudter Bridge and the Muehler Damm, are nearly as pretty. Hercules Bridge is 110 feet long, 35 feet wide, of a single arch, and is constructed of solid sandstone of a high grade. There is a handsome balustrade of polished stone. The centre groups on either side portray mythological scenes from the life of that fabled Greek hero, Hercules, one of them showing him slaying the Lernaean snake, the other his successful wrestling and choking match with the lion. Berlin's popular wit, which halts before nothing, interprets the last mentioned feat in a laughable manner. Hercules has pushed his



HERCULES BRIDGE.

one of the metropolises of the world is concerned, of recent growth. That is a fact which is being lost sight of by many who pose as judges. Territorially considered, three-fourths of Berlin dates since 1871, and the population has more than doubled during that brief period. All the more, however, is it to be praised that there is such a wealth of sculptural decorations in the Berlin of today. And another thing, nine-tenths of these sculptures being the product of but a quarter of a century's growth, they very faithfully portray the style and gifts of the younger generation of artists in Germany. The modern sculptor may, therefore, advantageously gather modern ideas and suggestions more plentiful here, I think, than in any other large city.

Of late, for instance, the Berlin municipal council has made special efforts to adorn old bridges spanning the river Spree and its canals within the banlieu, and likewise that score of new bridges con-

brawny fist down the throat of the royal beast, and the Berlinse say: "Raus muss cr!" looking upon the hero as a dentist trying to extract a decayed tooth. At the four approaches to the bridge sphinxes have been placed, each accompanied by some symbolical personage typical of the uses and benefits of water. Altogether this bridge is one of the artistically finest in Berlin.

Gertraudter Bridge, in the very heart of the business quarter, has only recently been finished. It is of about the same length as the above, but only 32 feet wide. The balustrade running on either side is of polished granite, the small pillars being of purely Romanesque style. The bridge takes its name after a fine statue of St. Gertrude, a sainted Berlin woman of the early medieval days, who was the wife of a staunch burgomaster and beloved for her charity. She is shown in the act of quenching the thirst of a parched goatherd passing her house.

A CROSS MONUMENT.

A pleasing design for a cross monument is that illustrated herewith, which stands in Woodlawn Cemetery, New York City.

Apart from the great significance attaching to the cross, as a symbol of the Christian faith, and as such, a most appropriate and beautiful memorial to grace the resting place of the Christian departed; or the fact that it also stands as an emblem of eighteen centuries of human progress of a pronounced character, it offers great opportunity for the exercise of the designer's art. It admits of a comparatively wide range of decoration, arbitrary as the outlines of its several forms appear.

In earlier times the use of the cross for memorial purposes was carried to a far greater extent than at present, but in many outlying portions of Christian cemeteries today nothing but the cross is seen in the simple graveyards.

While in many of the memorial works of the greatest sculptors the cross has figured conspicuously, and such works have compelled admiration, the interest attaching to the ancient crosses, and the mysterious intertwining of the Runic decoration, the endless band, is profound, and consequently many designs of the present day are simply modifications of the old cross, worked out to embody the broader thought of the present with the simplicity of the past, and the combination has produced some excellent work.

A few words on some of the old crosses will be

of interest; the oldest form is that of St. Anthony, known as the Tau cross from its being shaped like the Greek letter T. It is the cross of the Old Testament. It is supposed to be the cross of the brazen serpent and has been called the ideal precursor of the real cross.

The Latin cross, or *crux capitata*, is a cross the

transverse beam of which is placed at one-third of the distance from the top of the perpendicular part. This is the cross upon which Christ is said to have been crucified.

The Greek cross is the cross of St. George, the national saint of England. The four equal arms represent the Gospel preached to the four quarters of the earth by the four evangelists.

The St. Andrews cross, or *crux decussata*, is the symbol of the national saint of Scotland. It is formed like the letter X.

The Maltese cross, formed of four arrowheads meeting at the points, is the badge of the Knights of Malta. The eight points of the Maltese cross are said to symbolize the eight beatitudes.

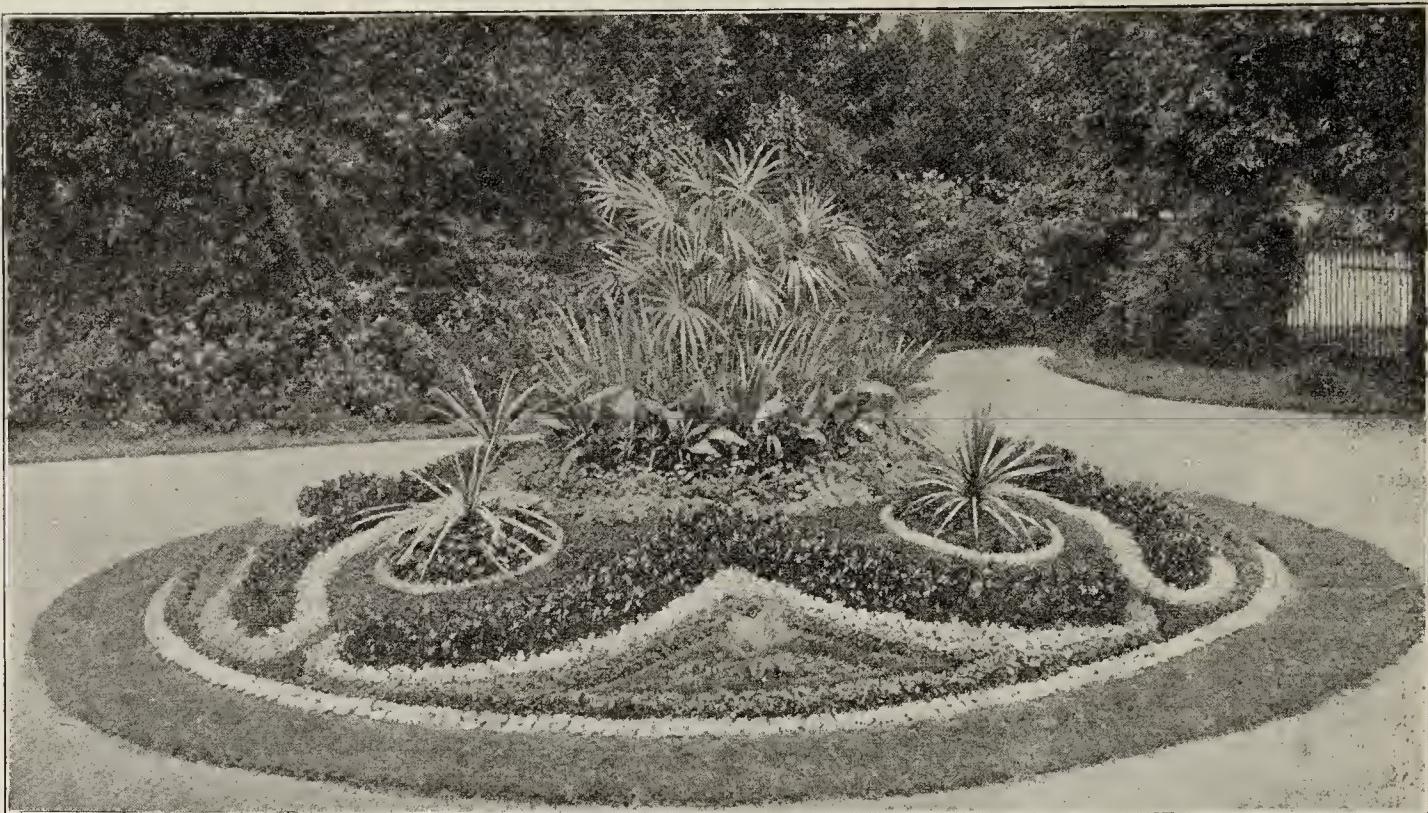
The cross of Constantine, figuring in the catacombs of Rome, is

FROM PHOTOGRAPH BY E. F. PIATTI, SC.

only the monogram formed by the first two Greek letters of the word Christ, and it is used to this day to represent Christ in Christmas, so often written Xmas.

These many forms of crosses and others have formed prolific themes for design, and have by their variety given opportunity for the creation of beautiful and suggestive memorials.





FOLIAGE AND FLOWER BED, PUBLIC PARK, LAHR, BAVARIA.

A FOLIAGE AND FLOWER BED.

The engravings herewith given illustrate a formally designed flower and foliage bed, which forms one of the gardening features of the public park at Lahr, Bavaria, and which is reproduced from *Moller's Deutsche Gartner-Zeitung*.

While the advocates of landscape work, pure and simple, discourage the formal flower bed, and especially when it assumes the grotesque, as it so frequently does in the effort to tickle the popular taste, the picture above inclines one to respect the arrangement, seeing that the background affords such a beautiful setting for the bed. The combination and arrangement in this case makes a pleasing picture.

By reference to the diagram plan more details of the design may be understood, as well as the filling in material. A close inspection will also reveal designating Roman numerals, which in connection with the following, will complete the description:

I. The center plant is a large *Chamaerops humilis* palm, surrounded by *Phormium Veitchi* and *Salvia patens*, with *Lobelia fulgens Queen Victoria*, on the outside of center.

II. *Ageratum, Johanna Pfitzer.*

III. *Zonale Geranium, Mme. Salleroi.*

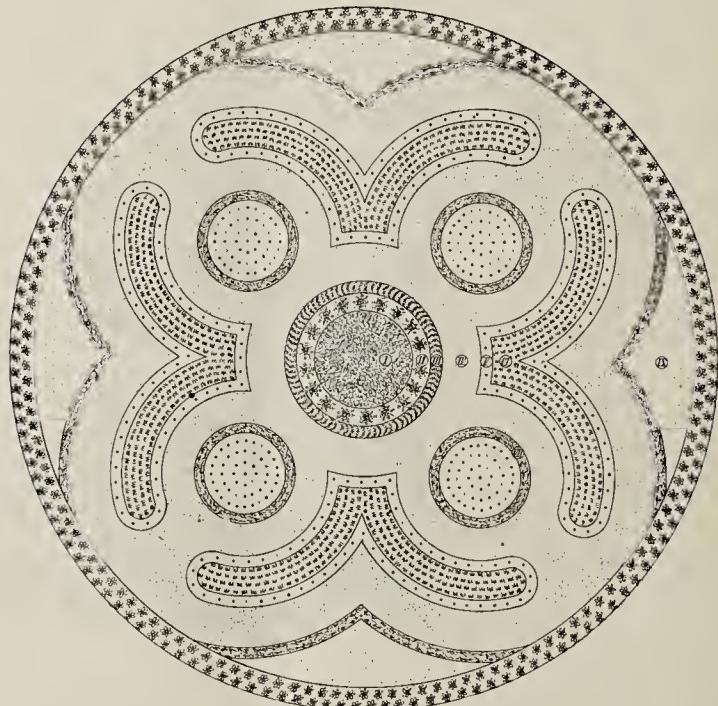
IV. *Alternanthera Amabilis.*

V. *Gnophalium lanatum.*

VI. *Begonia semperflorens, Perle von Stuttgart.*

VII. In the center of the smaller circle is a

Dracena lineata, surrounded alternately in each circle by *Coleus Hero* and *Acalypha Hamiltoniana*, the outer band being composed of *Santolina Tomentosa*.



PLAN.

VIII. *Alternanthera paronychioides aurea nana.*

IX. *Alternanthera versicolor.*

The diameter of the bed is about twenty-six feet, and the whole bed is bordered with a band of *Echeveria glauca*.

* PARK NOTES. *

A meeting of the citizens of Lowell, Mich., was recently held for the purpose of forming a Village Improvement Society. There is evidently an awakening over the country in the interest of out door improvement.

* * *

Mr. John D. Rockefeller has again placed Cleveland, O., under obligations of gratitude to him for a further gift of land valued at \$50,000, to extend her park system. The property is situated near the junction of Euclid avenue and Fairmount street.

* * *

Senator Hansbrough, at the instance of the Secretary of the Interior on February 10th. introduced a bill to Congress for the enlargement of Yellowstone National Park so as to increase the area from 3,312 square miles to 6,566 square miles.

* * *

The massive ornamental iron gates, which were never closed, and the posts supporting them which were capped by tall lanterns, standing for years at one of the entrances to Boston Common, and which the subway excavations undermined, are to be re-erected at the entrance to the site of the Confederate military prison at Andersonville, Ga.

* * *

It is intended to push the matter of the proposed National Park at Vicksburg, Miss., in Congress. Twelve states have endorsed the project. The bill provides for the purchase of 1,200 acres of land at a cost not to exceed \$50,000, and the amount asked from Congress is \$75,000, which will be the amount required for the next two years. The total cost is put at \$250,000.

* * *

There is evidently much activity in the Village Improvement Society of Falls Church, D. C. The talent possessed among its members for entertaining possibilities is naturally, from the locality, broad, and with Washington from which to draw for lecturing purposes, tends to keep up unflagging interest in the work of the society. While all villages or suburbs are not so advantageously placed, opportunities for exciting public interest in such good work are never wanting, and by the exercise of a little serious thought in planning and zeal in carrying out suggestions, almost anything looking to the general good can be accomplished. Now is the time to consider what work shall be done.

* * *

It is gratifying to note the growing appreciation of the landscape idea in its true sense in relation to the improvement of our streets and boulevards. In the proposed work of further improvement of the West Side Park system of Chicago for the coming season, attention is to be given to the connecting boulevards, in which some of the lawn spaces and obtrusive blanks are to be given landscape treatment. Several hundred trees will be planted immediately where needed. It has been decided by the South Park commissioners to keep the conservatory in Washington park open till 10 o'clock every night for a week in each month. In the course of improvements in the South Park system this spring it is the intention to plant some 213,691 trees and shrubs.

* * *

Floriculture both at the White House and public propagating grounds, Washington, appears to have no limitations, if we may judge from the floral decorations at the Presidential residence on the occasion of the banquet given in honor of President Dole of Hawaii, recently. The east room which was decorated from the propagating grounds consumed 2,000 carnations, 5,000 sprigs of azaleas, 2,400 spikes of Roman hyacinths, 200 spikes of

Dutch hyacinths, 2,100 violets, 400 roses, 400 tulips, 400 nun flowers, 500 ferns, more than a mile of garlands of smilax, 100 large palms and 1,000 blooming plants in pots. The dinner table which was furnished from the White House conservatory required 1,005 orchids, 600 lilies of the valley, 100 spikes of Dutch hyacinths, 100 pots of Chinese primroses, 300 pots of maidenhair ferns, 25 of farleyense and 175 strings of smilax.

* * *

A special report is being prepared in the Land Commissioners office at Washington, which recommends that a forest reserve be established on the site of the petrified forest of Arizona. Recent information is to the effect that it is being rapidly used up for commercial purposes. The forest, which is one of the wonders of the world, is located near Holbrook, in Apache County. The largest and finest specimens of silicified wood known are taken from it. Whole trunks of trees and stumps with portions of the roots are found there, converted into stone as dense and hard as the finest agate. A forest of trees appears to have been entombed in the rocks and to have been preserved by a slow process of replacement by silica from solutions permeating the bed. Subsequently the surrounding sediments were washed away, but the enduring fossils of the trees remained. Sections of these trees four feet in diameter, and large enough for the tops of tables, have been cut and polished. No other country in the world, it is claimed, can send to the lapidary such magnificent raw material of this nature as the petrified forests of Arizona afford. Not even the imperial works at Ekaterinburg, in Russia, with their wealth of kalkansto jasper, massive malachite, and other superb ornamental stones, can rival the beauty of the agatized wood of Arizona. By all means the government should exercise its authority to prevent the total despoliation of this natural wonder.

* * *

The general plans for the Zoological gardens in Bronx Park, New York, have been approved, and no expense was spared to present the most perfect plans possible to meet the object desired, many noted men's advice having been sought. The keynote of the plan of development, says the New York Tribune, has been the utilization of the natural features of the ground, such as shelter, shade, sunlight, water, hills, valleys and rocks, to the actual wants of the living creatures that must be furnished with homes. The development proposed is a work of adaptation, not creation. With the exception of the central glade, occupied by six important buildings, the animal area of the Zoological Park has been laid out with strict reference to the wants of the animals and the finest possibilities with respect to their care and public exhibition. Following this, the next highest aim has been to make all of the animal collections, and also all other portions of the park, easily and comfortably accessible to the public by means of numerous entrances and broad, well-shaded walks. There are five entrances, and the walks vary in width from eight to twenty feet, according to location. At the same time the landscape development of the park has received careful and thorough consideration. For a considerable period the society has had the benefit of the professional services of Charles N. Lowrie, landscape architect, of New York, and the results of his studies and plans, in co-operation with the work of the director and the architects, have been of great value to the final plan. With its 261 acres of beautifully situated land in Bronx Park, the Zoological Garden will be the monster "zoo" of the world, and the large animals will have the advantage of natural surroundings while they are in captivity. The houses for wild beasts like lions will be built on such a large scale that there will be no excuse for restless tramping behind the bars and snarling. The monkeys will have real trees to climb, and the room in the bird houses will allow the birds to fly about freely.

CEMETERY NOTES.

Burial in Westminster Abbey is not a question of money, but the interment fees aggregate \$500, says an exchange.

* * *

A cemetery improvement association is forming at Ellis Village, Jefferson, N. Y., to take the cemetery under its care.

* * *

The trustees of Elmwood Cemetery Company, Memphis, Tenn., have made public a shortage of \$13,000 in the accounts of its former treasurer, Ferd Trepp.

* * *

By the will of the late Philip A. Pyle of Mount Joy Township, Pa., besides directing that a monument be erected to his memory in the Lancaster Cemetery, he places \$1,000 in trust to the trustees for the perpetual care of monument and lot.

* * *

The annual meeting of the Little Lake Cemetery Company, Peterborough, Ont., was held on January 17th. The report showed that the greatest improvement for the year was the installation of a water supply by agreement with the Peterborough Water Company, and also the erection of a drinking fountain. The financial condition was satisfactory.

* * *

In the annual report of Lafayette Cemetery, Philadelphia, the directors compliment the superintendent on the neat and clean condition of the grounds. The present superintendent is Mrs. John K. Betson, who on the death of her husband, in 1896, was unanimously chosen by the board to succeed him in that office. The special fund for the perpetual care of lots is increasing, and the report generally is very favorable.

* * *

The directors of the Cemetery Association of Salina, Kan., taking time by the forelock, decided to call upon all the lot-owners to join in an effort to improve and beautify the cemetery. Among the facilities mostly needed is a water service, and it may be generally said that one of the principal means towards keeping small cemeteries in better shape is a water supply. It is a very good sign to note the growing feeling in many localities looking to cemetery improvement in the smaller places.

* * *

A bill is to be urged in the House of Delegates of Maryland to increase the punishment for vandalism in cemeteries and graveyards. This bill was inspired by the recent outrages in the cemetery at Williamsport. The present penalty is very light, a small fine or imprisonment for thirty days in the county jail. The new bill proposes to amend the existing law by increasing the fine from \$5 to \$500, imprisonment in the House of Correction or jail from six days to two years, or both fine and imprisonment.

* * *

Battle Grove Cemetery, Cynthiana, Ky., is being greatly improved on modern lines, under the superintendency of Mr. J. A. Thorn, one of the latest members of the Association of American Cemetery Superintendents. As soon as the weather permits active work will again be in progress. Considerable work has been done to permanently improve the roads and driveways; the grave mounds will be lowered to about three inches, and corner-posts set level with the ground. It is intended to make of Battle Grove an ideal cemetery.

* * *

The officials at Mount Auburn Cemetery, Cambridge, Mass., are asking for permission to erect a building suitable for purposes of incineration of the dead. The need of a crematory is

felt greatly. The authorities find that many people wish to have their relatives cremated, and believe that it would be advantageous to have a crematory located in the cemetery. It has been suggested that powers should be obtained from the proper source to permit the erection of crematories by cemetery corporations finding it advisable to do so.

* * *

Agitation to close the old cemetery at Revere, Mass., and to secure more accommodation elsewhere, is under strong headway. This cemetery, in which bodies have been buried since 1650, is nearly doubly full, yet the population demands facilities for inexpensive burial. Only a little of the pathway is vacant, and there are no lots for sale. The superintendent declares that he has to make very shallow graves, and that once in making a grave he turned up four skulls. Houses are being built quite close to the cemetery, and there is urgent need for a change.

* * *

The periodical raids of the tombstone vandal seem to be in progress, for exchanges report defacement and destruction from several points. Justice treats this description of crime far too leniently. In the majority of cases it is looked upon as mere mischief, and punished far too lightly to act as a deterrent. As a matter of fact, it is a serious offense, for while since the owners of the defaced memorials suffer some pecuniary loss, the community at large suffers in reputation, and a lack of respect for the sacred precincts is encouraged by the slight value placed upon such delinquencies.

* * *

The undertakers of Lowell, Mass., are stirred up over the action of the superintendent of Edson Cemetery, who by the direction of the trustees, has notified them that hereafter a fee of \$10 will be charged for placing the bodies of persons over 12 years of age in the receiving vault. The cause of the change of rules is said to be due to the practice of some undertakers of putting bodies in the tomb free of charge, and keeping them there during the winter. This has resulted oftentimes in great inconvenience, and in some cases has left it to the cemetery authorities to bury the body at expense of city. Edson is a city cemetery, and the rule is claimed to be inconsistent.

* * *

A bill has been prepared and approved by the lot-owners and others interested in the Rural Cemetery, St. Johns, N. B., to legalize the purchase of a piece of contiguous property, and also the contracts made for the perpetual care of lots and monuments, and for the preservation of the monies received by the association for that purpose. The progressive spirit evinced by this company has been commendable to a degree. The report said the object of this feature of the bill is: "to promote the great principle in cemetery work of perpetual care among the lot-holders by affording to them amplest security that the funds entrusted to them will be kept intact and safe under the guardianship of the law."

* * *

A plan providing for a perpetual care fund to be placed at the disposal of the cemetery commissioners at Grand Rapids, Mich., and by them invested for the purpose of caring for the lots of the person appropriating the fund is proving very popular. Bequests are being made by testators, as well as by living lot-owners. One provision of the law seems to have caused a little figuring on the part of the testators. It is provided that where the bequest is for \$100 or more an order of the court must be obtained for putting the money into the hands of the commissioners. A majority of the persons who make use of this fund wish to devote just \$100 to the purpose and to avoid the payment of the fee required to get the order from the court they fix the amount at \$99.99. The commissioners have safely invested the gathering funds, realizing 4½ per cent., thus having \$4.50 to expend annually on each lot.

Cemetery Reports.

The 66th annual report of the trustees of Mount Auburn cemetery, Boston, to Dec. 31, 1897, shows that business for the year has been good. The Repair Fund, the income of which can only be applied to the care of lots, has increased \$40,473.77 and now amounts to \$937,886.85. The Permanent Fund, for the care of the cemetery after all the lots are sold, amounts to \$378,172.48, an increase of \$13,711.25. The general fund is \$140,168.96, which will be considerably reduced when payments are made on the new chapel and office buildings. Among the improvements of the year were: 35 monuments and 309 headstones erected, 1 tomb and 17 iron fences removed, and also 4 granite curbings. Work is also progressing on the new buildings. There were 492 interments and 38 removals from other cemeteries made, bringing the total interments in the cemetery to 31,937. The total receipts for the year were \$194,910.81, which included: Sales of lots \$21,594.70; labor and materials on lots \$59,402.80; deposits in Receiving Tomb \$1,147. The total expenditures were \$194,507.51, which included among other items, Labor, \$37,623.42; materials, \$10,801.71; repairs of buildings and fences, \$1,00,71; account of new chapel \$21,290.02.

* * *

The 50th annual meeting of the Swan Point Cemetery Corporation of Providence, R. I., was held February 1st. The report comments upon the improvements, the planting out of the ravines and the preparation for the new entrance, which will embody some new features of construction. The necessity of laying out the plans for the new chapel, offices, etc., called for by other improvements is touched upon. The fund which has been known as the corporate fund, which has been carried on the books since 1868, and which results from setting aside 13 cents for every foot of land sold or laid out in paths or avenues, now amounts to \$54,622.95, and has been changed on the books to the permanent fund. The perpetual care and bequest fund has increased \$10,449 during the year. The statistics of the year to December 31, 1897, are as follows: Average number of men employed per month during the year, 62; interment, including twenty-five to the receiving tomb, 306; slate vaults built, 100; foundations to monuments and tablets built, 218; plain graves opened, 152; curbing removed from lots, 2; land sold, square feet, 15,681; number of lots under perpetual care and upon which bequests have been made, 1,473; number of lots under annual care, 530; number of lots under partial care, 288; number of lots not under care, 964; whole number of lots sold to date, 3,255. The report of the treasurer showed that the total assets are \$522,026.92; liabilities, \$1,644.47, balance, corporate property, \$520,382.45; perpetual care and bequest fund, \$260,684.15; receipts during the year, \$109,125.13; payments, \$97,953.70; balance, \$12,071.43.

* * *

The sixtieth annual meeting of the trustees of the Rural Cemetery, Worcester, Mass., was held January 24th. The report shows the funds for perpetual care to amount to \$76,825.30, which includes an increase of \$1,550 during 1897. The number of burials was eighty-seven; seven inside curbs were taken out and three iron fences moved. Considerable work was done in raising low and wet places and otherwise improving the grounds. In the report the trustees emphasize "the fact that in no way can the old proprietors or their heirs assist so much in beautifying the grounds as by placing in the perpetual care of the corporation those lots which in the early days were sold without the wise provision of perpetual care, leaving the care in each individual case to the proprietor, as his taste or interest or pecuniary ability might direct. Too often, however, the result is neglect and unsightly conditions. Let any one look for himself. May the suggestion be heeded, and the trustees be thereby not only gratified, but amply rewarded for their own gratuitous services."

* * *

The mayor of Salt Lake City, Utah, in his annual message

refers to the City Cemetery as follows, and his remarks will be generally indorsed: "The total cost of maintaining the City Cemetery for the year was \$7,354.65, and the total receipts were \$6,081.40. The cemetery should be self-sustainable, and I am of the opinion that by judicious management it could be made so. There is no good reason why the cost of maintenance should exceed the receipts by nearly \$1,300.

* * *

The annual report for 1897 of the Pine Grove Cemetery Commissioners of Lynn, Mass., expresses gratification on the satisfactory results of the year's work, and details the improvements effected and in progress. In speaking of the lawn plan it says: "Every year we hear remarks made upon the beauties of the lawn system in laying out of the grounds, which is now, as far as possible, adopted in our cemetery, and all the leading cemeteries in the country. As conformity is one of nature's laws, the effect cannot fail to be attractive." Many improvements have been completed about the grounds, roads and avenues, with large additions to the ornamental shrubs. A fountain, presented by the late Hon. Joseph Davis, has been placed in the rockery, and attracted much attention. The perpetual care fund has been increased the past year by the amount of \$5,720, and it now amounts to \$99,822. Interments for the year 1897 were 593; total buried in the cemetery January 1, 1898, 16,260. The receipts were \$22,426.62, and expenditures \$22,425.62.

* * *

The forty-fourth annual report of the Board of Cemetery Commissioners to the City Council of Cambridge, Mass., for the year ending November 30, 1897, reveals more promising conditions than have prevailed since the beginning of the hard times, the amount received from sales of lots being the largest in the history of the cemetery. The total receipts were \$19,644.05, and expenditures \$19,846.77. The amount appropriated by the city was \$20,500. Among the receipts were the following items: Sale of lots and graves, \$8,678.63; burial and tomb fees, \$4,990; care of lots, \$2,990.02; foundations, brick graves, etc., \$1,425.55. The number of interments for the year were 673, making the total in the cemetery 21,659. There were 11 monuments and 118 headstones erected. Forty-four lots and 33 single graves were sold. The average number of men employed was 19. The whole number of lots under perpetual care is 292, and the fund aggregates \$40,184.58. Many improvements were consummated last year, and considerable work is planned for this season.

* * *

The annual report of the treasurer of the Manchester, N. H. cemeteries showed that the trustees were custodian of funds amounting to \$52,896.31, all of which except cash in hand have been invested in cemetery bonds bearing 5 per cent. interest. For Pine Grove Cemetery there was received during the year \$4,428.95 for the perpetual care of lots, making a total fund of \$37,666.37. The receipts for the Valley Cemetery were \$1,674.02, making a total fund of \$13,892.05.

Mr. Volney W. Foster, of Evanston, Ill., has for many years practically encouraged the care of birds in the streets and parks of that classic town, by disseminating knowledge of the laws relating to such matters in the public schools and providing feeding troughs in various localities. Last fall Mr. Foster extended his plan and brought several colonies of squirrels to enjoy the hospitality of Evanston. The result of the idea has been to largely increase the number of these beautiful denizens of the trees and thickets. But there has also been a tendency to increase the number of undesirable birds, and this has brought the attention of the Audubon Society to the subject, which may result in modification of the feeding plan. Nothing however can be said detrimental to the beautiful idea involved and the pleasurable results which have attended the effort.

Association of American Cemetery Superintendents.

G. W. CREEZY, "Harmony Grove," Salem, Mass., President.
ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., Vice-President.
F. EURICH, Woodward Lawn, Detroit, Mich. Secretary and Treasurer.

The Twelfth Annual Convention will be held the coming fall at Omaha, Neb.

The Park and Out-Door Art Association.

JOHN B. CASTLEMAN, Louisville, Ky., President.
L. E. HOLDEN, Cleveland, O., Vice-President.
WARREN H. MANNING, Tremont Building, Boston, Mass. Secy. and Treas.

The next meeting of the Association will be held at Minneapolis, Minn., June 23, 1898.

Publishers' Department

Park Commissioners and Cemetery trustees are requested to send us copies of their reports.

Photographs and descriptive sketches of interesting features in parks and cemeteries are solicited from our readers.

The Executive Committee of the National Association of Funeral Directors, which recently met in Washington, D. C., passed a resolution changing the date of the Annual Meeting, which this year is to be held at Omaha, Neb., from the second Wednesday in October to the first Wednesday of the month, namely October 5th. This action makes impossible the proposed joint session with the cemetery superintendents and excursion to the Yellowstone Park.

Edward Carter succeeds Charles Drew as superintendent of Oakwoods cemetery, Chicago.

Mr. Otto Buseck, superintendent, Department of Parks, Paterson, N. J., has been compelled to resign. A stormy meeting of the Park Commissioners as reported in the press, suggests that a very low order of politics is the governing principle with Paterson's Park Commissioners.

The Douglas Nursery Company Waukegan, Ill., a short time since closed a three years' contract with the United States government to furnish evergreen trees in large quantities. The government will plant young trees in the arid regions of the south, in Oklahoma, Texas, Arizona and elsewhere.

Ex Gov. Morrill of Kansas once said that his ambition was to create in Kansas the largest orchard in the world and leave it as a monument to his memory. That hope is about to be realized, as he has turned his farm over to a man with the stipulation that 65,000 fruit trees, mostly apples, are to be planted there.

RECEIVED.

From Charles S. Childs, superintendent

Annual Report of the Board of Cemetery Commissioners to City Council of Cambridge, Mass. Illustrated with half tone.

Eighth Annual Report of the Park Commissioners of the City of Paterson, N. J., for year ending March, 1897. Beautifully illustrated with half tone engravings.

Annual Reports of the Directors of the Lafayette Cemetery, Philadelphia, for 1896, 1897.

The Sixty-sixth Annual Report of Mount Auburn Cemetery, Boston, Mass., January 1st, 1898.

From Theo. Elsasser, superintendent, seven photographs of Westminster Cemetery, the new cemetery in the suburbs of Philadelphia, showing the improvements made during the past year.

An excellent group of eight views surrounding a birds-eye view, mounted in map form, of the Lakeside cemetery of Buffalo.

From Mr. Geo. S. Rhedemeyer, superintendent, Views and Regulations of Harleigh cemetery, Camden, N. J., adopted by the Trustees January, 1898. The pamphlet is beautifully illustrated with half tones.

City of Cambridge, Mass. Park Department, Annual Reports for the year 1897. Illustrated with maps and a number of photogravure pictures.

Hillside Cemetery Co., Philadelphia, Pa. Calendar comprising complete annual calendars from 1776 to 2000. With numerous views in the cemetery.

UNIVERSITY OF MAINE. MAINE AGRICULTURAL EXPERIMENT STATION.

Bulletin No. 41. January, 1898. Dehorning Cows.

CORNELL UNIVERSITY AGRICULTURAL EXPERIMENT STATION, ITHACA, N. Y. Bulletin 142. January, 1898. The Codling Moth. By M. V. Slingerland.

CATALOGUES.

No. 2. Spring of 1898. Annual Catalogue of The Storrs & Harrison Co., Painesville, O. 168 pages. Trees, Flowers, Vegetables and Seeds.

Catalogue 8A. Rare Seeds of the Rocky Mountains and Western United States. D. M. Andrews, Boulder, Colo.

Wholesale Catalogue of Trees, Plants, Bulbs, Seeds, etc. Japanese Nursery, 272 Boylston st., Boston, Mass.

Miss C. H. Lippincott, the Pioneer seeds-woman, Minneapolis, Minn., has issued a dainty seed catalogue, which can be had on application.

Ellwanger & Barry's Supplementary Catalogue, Novelties, etc., 1898. Mount Hope Nurseries, Rochester, N. Y. This smaller catalogue of the well-known firm contains novelties and specialties among fruit trees and bushes; new and rare ornamental trees; evergreens; ornamental shrubs; hardy plants and new roses of all classes. This catalogue may be had on application, and the firm needs no endorsement.

A Modern Village.

One of the important landscape creations upon which Mr. Warren H. Manning, of Boston, acted as landscape architect in charge, is Pinehurst, a winter resort village of one hundred acres in extent, situated in about the centre of the state of North Carolina. The site was a

dry upland, made up of a succession of broad ridges and valleys gradually merging into each other. The conditions imposed, such as providing comfortable accommodations for winter visitors, and attractive landscape features to add zest to their residence, made careful study of the resources and possibilities of the neighborhood essential to a successful plan. The central feature and indeed the most prominent feature of the plan is the Village Green, really the heart of the village, upon which the principal buildings face, and about which, and on the streets radiating from it, the residences are located. The whole scheme was carried out under circumstances that could not but yield good results, and is an example for others to follow. The purpose and character of the project was outlined by the proprietor; the plans were fixed upon and executed upon the grounds by the landscape architects; suitable buildings for the various purposes were designed and constructed by the architects; water, sewer, lighting and transportation systems were designed and installed by competent engineers; and the representatives of these various professions in co-operation with the town superintendent worked in harmony and produced an up-to-date winter resort. This is an example of village creation worthy of consideration.

A French Insect Trap.

A French agricultural magazine records one of the queer discoveries of the past season, by means of which gardens and lawns can be kept free of insects, or at least the number may be reduced to a notable degree. It is an insect trap, and this is the way to construct it. Bury a fairly large bell-shaped vessel in the earth, with the rim even with the surface. Put some water into it and an inverted flower pot into the water. On the flower pot put a napkin smeared with honey or molasses. Place another bell-jar over the whole thing and heap up earth around its edges, taking care to arrange a small opening for the insects to enter. The "bait" will attract insects from an incredibly large area, and when they have found their way into the trap very few will get out.

Speaking of the Florida Palmetto tree an exchange says: It is a well known fact that some trees live to a great age, the oak, elm, cedar, hickory, etc., but the palmetto trees of the South, and particularly those along the Indian River, Fla., are really a curiosity for their long life. The older trees are gracefully straight about forty or fifty feet high, having a diameter of eight to ten inches, and so smooth that they look as if they had been shaved with a carpenter drawknife up to about three feet of the green spreading fan leaves, which form a top without a single branch. They are from three to five hundred years old, according to their height and are so tough, that they will bend almost to the ground in a gale of wind then spring back to their normal position again. A curious fact about the "cabbage palmetto," as it is called, is that it grows only from the top, having a cabbage-like head which, when young, is a palatable food for man or beast, and if a rifle ball were to penetrate the centre of it, the tree would die. Any amount of hacking or girdling may be done to the trunk, however, without injury to the tree.

PARK AND CEMETERY

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R. J. HAIGHT, PUBLISHER.

CHICAGO.

INDEX.

A

- *A Good Beginning..... 213
- A Plantation Graveyard..... 186
- *A Planting Chart of Garden Plants..... 90, 110, 148
- *A Woodland Path..... 241
- Aesthetic Forestry..... 211
- American Forestry Association..... 136
- Appreciation of Natural Beauty..... 92
- Arbor Day..... 57
- Arbor Day Exercises Here and There..... 33
- Arbor Vitæ Americana..... 242
- Arnold Arboretum, Boston..... 46, 97, 156

B

- Beautiful Fall Foliage..... 163
- Bicycling in Australia..... 156
- Bicycling in the Cemetery..... 109
- *Boulder Work in Swan Point Cemetery, Providence, R. I..... 217
- Burial of Lieut. Jenkins, in Union Dale Cemetery, Allegheny, Pa..... 58

C

- Care of Lawns 30
- *Caladium Blossom..... 179
- Cemeteries:**
 - Aspen Grove Cemetery, Ware, Mass..... 117
 - *Birmingham, Mich., Women's Cemetery Association and its Work 8
 - *Charles Evans Cemetery, Reading, Pa..... 146
 - Druid Ridge Cemetery, Baltimore, Md..... 98
 - Key West, Fla..... 98
 - National Cemetery, Arlington, Va..... 170
 - *Prospect Hill Cemetery, Omaha, Neb..... 221
 - *Riverside Cemetery, Rochester, N. Y..... 166
 - West Park Cemetery, Cleveland, O..... 98
 - *Woodlawn Cemetery, Detroit, Mich..... 84
 - Notes..... 19, 37, 58, 77, 98, 117, 137, 157, 185, 205, 225, 244
 - Oak Ridge, Springfield, Ill..... 117
 - Zanesville, O., Cemeteries..... 37
- Reports..... 19, 37, 58, 245
- Allegheny Cemetery, Allegheny, Pa..... 117
- Amherst, Mass..... 59
- Boston Catholic Cemetery Association..... 77
- Cedar Hill Cemetery, Hartford, Conn..... 206
- Fairmount C'met'ry, Newark, N. J..... 19
- Forest Hills Cemetery, Boston..... 58
- Grand Rapids, Mich..... 78
- Hollywood Cemetery, Richmond, Va..... 77
- Island Cemetery, Newport, R. I..... 37
- Little Lake Cemetery, Peterborough, Ont..... 244
- Lowell Cemetery, Lowell, Mass..... 19
- Magnolia Cemetery, Charleston, S. C..... 98
- Marion, O..... 58
- Mt. Auburn Cemetery, Boston..... 245
- Mount Royal Cemetery, Montreal..... 245

*Illustrated.

- Mountain View Cemetery, Oakland, Calif..... 245
- New Bedford, Mass..... 58
- North Burial Ground, Providence, R. I..... 245
- Oakland Cemetery, St. Paul, Minn..... 205
- Rural Cemetery, St. John, N. B..... 37
- Rural Cemetery, Worcester, Mass..... 245
- Spring Grove Cemetery, Cincinnati, O..... 185
- Spring Grove Cemetery, Hartford, Conn..... 77
- Woodlawn Cemetery, New York..... 58
- Cemeteries of Use to the Living..... 114
- Cemetery Bill, District of Columbia..... 19
- *Cemetery Greenhouses..... 7
- Cemetery Roads..... 4
- *Chapel Riverside Cemetery, Cleveland, O..... 195
- Children's Parks in the Cities..... 36
- *Chrysanthemums in Chicago..... 164
- Civic Club of Philadelphia..... 57
- *Coles Monument, Newark, N. J..... 44
- Contributed Criticism..... 38
- *Convention of the Park and Out-Door Art Association at Minneapolis, Minn..... 85
- Correspondence:**
 - A New Rule to Govern the Sale of Lots..... 139
 - Cemetery Improvement..... 118
 - Default in Purchase of Lots..... 96
 - Elodea Canadensis..... 158
 - Formal Gardening..... 186
 - Leaves..... 186
 - Musings..... 226
 - Planting Station Grounds..... 186
 - Politics in the Parks..... 40
 - Private Graveyards of New England..... 139
 - Remarks on Contributors to Park and Cemetery..... 20
 - Reminiscence of H. W. S. Cleveland..... 139
 - Removals of Bodies from Unpaid Lots..... 118
 - Sunday Funerals..... 245
 - The Disadvantage of Selecting Trees for Cemetery Planting..... 139
 - Water Lilies..... 78
- Cremation..... 183
- Cremation of Frances E. Willard..... 37
- Cultivating a Sense of Beauty..... 223
- Cutting Out Trees in Franklin Park, Boston..... 55

D

- *Design for the Laying Out of a Small Cemetery..... 29
- *Destroying Poison Ivy..... 216
- *Devil's Den, Gettysburg..... 67
- Duties of Park Commissioners..... 143

E

- Early Flowering, Bulbous and Tuberous Plants..... 182, 199, 222
- Editorial:**
 - A Government Cemetery in Florida..... 41
 - Appropriate Memorials..... 161
 - American Park and Out Door Art Assoniation..... 229
 - Arbor Day..... 1, 23
 - Art Commissions..... 162

- Cemetery Improvements..... 229
- Cemetery Gardening..... 230
- City Art Embellishment..... 23
- Convention Programmes..... 230
- Educating Lot-Owners..... 209
- Formal Gardening..... 141
- Funeral Reform..... 122
- Ideal Surroundings..... 161
- Improving the Country Cemetery..... 189
- Increase of Mausoleums..... 142
- Memorial Day..... 41
- National Sculpture Society Exhibition..... 62
- Nurseries in the Cemetery..... 161
- Park and Out-Door Art Association..... 41, 62, 81, 82
- Park Laborers..... 189
- Perpetual Care..... 1
- Planting the School Yard..... 122
- Politics in the Parks..... 210
- Progress and Apathy..... 23
- Relationship with Nature..... 101
- Restricting Monumental Work..... 210
- Soldiers Monument, New York City..... 61
- Status of the Landscape Gardener..... 122
- The Lawn Plan..... 190
- The Merits of Earth Burial..... 162
- The Work of Horticultural Societies..... 101
- There Must be Harmony Between Architect and Landscape Architect..... 102
- Tree Destruction..... 190
- Twelfth Annual Convention of the A. A. C. S..... 81, 101, 121
- Useful Gifts to Cemeteries..... 141
- Woman and her Work..... 209
- Work of the Horticulturists..... 142
- *Electric Funeral Car, San Francisco, Calif..... 56

F

- Fairmount Park Art Association..... 204
- Florists and Park Officials..... 136
- Fleischman Mausoleum, Cincinnati..... 19
- Flower Notes..... 9
- Forest Growths of Isthmus of Panama..... 11
- Fountains of Paris, France..... 76
- Furber Memorial Chapel, Somerville, N. H..... 157

G

- *Garden Plants.—Their Geography:**
 - Asterales—The Valeriana, Aster, and Mutisia Alliance..... 71, 94, 112, 132, 153
 - Campanales—The Candallea, Lobelia and Campanula Alliance..... 179
 - Ericales—The Vaccinium, Erica and Epacris, Alliance.... 202, 220, 240
 - Rubiales—The Sambucus, Gedenia and Galium Alliance... 34, 52
 - Umbellales—The Hydrocotyle, Aralia and Cornus Alliance.... 12
 - Getting Rid of Ants..... 67
 - Government Assistance in Forestry..... 153

H

- *Henry George Monument, Greenwood Cemetery, Brooklyn..... 129

*Horticultural Buildings, New York	
Botanical Garden, Bronx Park...	4
Horticultural Notes.....	63

I

*Improvements in Cemetery Work..	199
----------------------------------	-----

L

Landscape Gardening in Prospect Park, Brooklyn.....	36
*Laurel Oak,— <i>Quercus Imbricaria</i> ..	46
Leafage of Trees.....	171

Legal:—

Cemetery Companies can be Sued for Negligence.....	66
Evades the Constitutional Question.....	118
General Rules of Law as to Burial Being Final and Remains not Removable by Owners of Cemetery Lots	158
Guarantor Reimbursed for Payment.....	50
Liability for Cutting Trees on Cemetery Lot.....	226
Limit of Cemetery Exemptions ..	50
Stated Cause of Action.....	50
The Poison Ivy Case.....	118, 206
Lightning and Trees.....	203

M

*Mackay Mausoleum, Greenwood Cemetery, Brooklyn.....	106
Magnolias.....	230
*Main Entrance, Crown Hill Cemetery, Indianapolis, Ind.....	196
*Mausoleums.....	218
*Meditation on Moneywort.....	15
Michigan Central Depot Improvements.....	136
Monstrosities in Trees.....	151
Monument Erected by Queen Victoria	5
Monuments and Parks of Brussels..	74
*Mount Greenwood Cemetery, Chicago.....	232
Most Extraordinary of Men.....	242

N

National Flower Movement	18
*National Sculpture Society Exhibition.....	68
*Natural Scene, Forest Park, Brooklyn, N. Y.....	7
New Jersey Cemetery Enactments.	112
New Method of Making Macadam Roadways	133
*New Nurseries of the City of Paris.	32

O

Opening Coffins of Voltaire and Rousseau.....	3
Our Association—Its Object, and What has been Accomplished....	127
*Out Door Art and Workingmen's Homes	104

P

Parks and Out-Door Art Association	42
--	----

Parks:—

Battery Park, Burlington, Vt....	76
Boston's Public Grounds.....	116
Campus of Wabash College.....	204
Cincinnati Parks.....	204
City of Cambridge, Mass	231
Essex County, N. J. Park System.	18
Golden Gate Park, San Francisco	57
Hubbard Park, Meriden, Conn...	97
Indianapolis, Ind.....	76
Methuen, Mass.	116

*Illustrated.

Milwaukee, Wis.....	97
Minnehaha Park, Minneapolis, Minn	36

*Kene Park, Hartford, Conn	168
----------------------------------	-----

*Krug Park, St. Joseph, Mo.....	194
---------------------------------	-----

Lake Front Park, Chicago.....	18
-------------------------------	----

*Lansdowne Ravine, Fairmount Park, Philadelphia.....	193
--	-----

Lincoln Park, Chicago.....	76, 204
----------------------------	---------

Memphis, Tenn.....	156
--------------------	-----

National Military Park, Chattanooga, Tenn.....	136
--	-----

New York Parks.....	2
---------------------	---

Notes.....	18, 36, 57, 76,
------------	-----------------

97, 116, 136, 156, 184, 204, 224, 243

Penn Park, York, Pa.....	136
--------------------------	-----

Prospect Park, Brooklyn.....	184
------------------------------	-----

Riverside Park, Hartford, Conn..	243
----------------------------------	-----

Salt Lake City, Utah.....	243
---------------------------	-----

San Francisco Park Report.....	18
--------------------------------	----

Schenley Park, Pittsburgh, Pa...	184
----------------------------------	-----

Tacoma, Wash.....	224
-------------------	-----

West Side Parks, Chicago.....	224
-------------------------------	-----

White Forest of Woolmer, England.....	36
---------------------------------------	----

Perpetual Care of Cemeteries.....	31
-----------------------------------	----

Plants:—

A New Plant from Guadalupe..	231
------------------------------	-----

Cannas and Caladiums	2
----------------------------	---

*Clematis paniculata.....	178
---------------------------	-----

*Evergreen Hybrids of Rosa Wichuriana.....	108
--	-----

*Fancy Leaved Caladiums.....	192
------------------------------	-----

*Iris Versicolor and its Neighbors About the Pond.....	130
--	-----

Laughing Plant of Arabia.....	135
-------------------------------	-----

Planting Cactuses.....	7
------------------------	---

*Tamarix Amurensis.....	173
-------------------------	-----

Two Native Umbellworts—Angelica Atropurpurea — Heracleum Lavatum.....	151
---	-----

*Victoria Regia.....	196
----------------------	-----

Vinca Minor.....	179
------------------	-----

*Water Lilies—When and How to Grow Them	26
---	----

White Roses for the Cemetery...	150
---------------------------------	-----

Plant Propagation for Parks	96
-----------------------------------	----

Points for Cemetery Officials.....	21
------------------------------------	----

Preparation of Ground for Planting Trees.....	73
---	----

Protecting Tender Trees and Shrubs in Winter.....	191
---	-----

Publisher's Department.....	21, 39, 60, 79, 99, 120, 140, 160, 188, 208, 228, 247
-----------------------------	---

R

*Receiving Vaults for Small Cemeteries	152
--	-----

*Residence Streets..	10, 25, 42, 64, 82, 103
Rights of Parents in Bodies of Children.....	185

*Royal Botanic Gardens, Kew, England	47, 69, 89, 111, 134, 145, 174, 202, 214, 240
--	---

Rural Cemeteries—Suggestions for Organizing	54
---	----

S

*Scene in Fairmount Park, Renovating Old Trees, etc.....	131
Seasonable Hints.....	47

Selected Notes and Extracts:—

A Good Dry Weather Plant.....	140
-------------------------------	-----

A Troublesome Weed.....	187
-------------------------	-----

Arctic Trees.....	207
-------------------	-----

Bed for Rhododendrons	227
-----------------------------	-----

Bracken in the Shrubberies.....	159
---------------------------------	-----

Care of Climbing Roses	187
------------------------------	-----

Caryopteris Mastacanthus.....	140
-------------------------------	-----

Decay of Shade Trees	119
----------------------------	-----

Disturbing Nature's Balance	227
-----------------------------------	-----

Dwarf Trees.....	246
------------------	-----

Elm Leaf Beetle.....	140
----------------------	-----

Euonymus Berries.....	207
-----------------------	-----

Flower Vases in Cemeteries.....	159
---------------------------------	-----

Four Valuable Shrubs.....	207
---------------------------	-----

Garden Fences.—Painting Tree Wounds.....	246
--	-----

Grafting Moutan Paeonies.....	159
-------------------------------	-----

Ground Bones	159
--------------------	-----

Hop Covered Archways.....	187
---------------------------	-----

How to Make Hoya Carnosa Bloom	207
--------------------------------------	-----

Hydrangeas.....	207
-----------------	-----

Judicious Grouping of Trees and Shrubs.....	187
---	-----

Landscape Gardening at the World's Fair.....	119
--	-----

Making Cement Pipes in Situ.....	187
----------------------------------	-----

Nature in Landscape Art.....	246
------------------------------	-----

Night Blooming Cactus.....	187
----------------------------	-----

Propagating Conifers.....	119
---------------------------	-----

Pruning Flowering Shrubs.....	227
-------------------------------	-----

Pruning Shrubs.....	140
---------------------	-----

Pruning Transplanted Trees.....	207
---------------------------------	-----

Roses in the Cemetery.....	246
----------------------------	-----

Shaded Highways.....	119
----------------------	-----

Shrubbery Beneath Trees.....	140
------------------------------	-----

The Clematis.....	227
-------------------	-----

To Destroy Gophers and Other Burrowing Animals	246
--	-----

Transplanting Beech Trees—An Evergreen Screen	159
---	-----

Shade Trees for a Narrow Border...	38
------------------------------------	----

Shrubs and Trees for Parks.....	192
---------------------------------	-----

Sleep of Plants.....	175
----------------------	-----

Small Parks in New York.....	156
------------------------------	-----

Some Difficulties of the Park Superintendent.....	143
---	-----

*Some Recent French Monuments...	15
----------------------------------	----

Some Specimen Trees and Shrubs:

*Acer Rubrum Var.....	138
-----------------------	-----

*Euonymus as a Tree Climber.....	172
----------------------------------	-----

*Retinosporas for Cemetery Planting	172
---	-----

*White Weeping Mulberry.....	138
------------------------------	-----

State Parks—Massachusetts.....	36
--------------------------------	----

Street Trees.....	96
-------------------	----

Sunday Funerals.....	210
----------------------	-----

*Sunken Flower-Bed and Oriental Planes, Fairmount Park, Philadelphia.....	28
---	----

Swiss Cemeteries.....	185
-----------------------	-----

T

*The Dyer Fountain, Roger Williams Park, Providence, R. I.....	234
--	-----

The Hampton Court Grape-Vine.....	195
-----------------------------------	-----

The Clergy and the Cemetery.....	58
----------------------------------	----

The Influence of Parks on the Character of Children	95
---	----

*The Mortuary Chambers at Munich, Germany.....	50
--	----

The Prickly Pear	65
------------------------	----

Thoughts on Cemeteries	16
------------------------------	----

*Tomb of Washington, Mt. Vernon.	6
----------------------------------	---

Tree Planting—Its necessity and Benefits	24
--	----

Tree Planting on Public Streets.....	176
--------------------------------------	-----

Trees not to Plant in Parks and Cemeteries	213
--	-----

Trees in Streets and Elsewhere.....	44
-------------------------------------	----

Trespassing in Riverview Cemetery, Wilmington, Del.....	137
---	-----

*Twelfth Annual Convention of the Association of American Cemetery Superintendents ..	83, 123
---	---------

W

Wade Memorial, Cleveland, O.....	19
----------------------------------	----

*Water Lilies—Victoria Trickeri.....	237
--------------------------------------	-----

What Do You Do With Your Leaves	153
---------------------------------------	-----

Why New Cemeteries Should Adopt the Lawn Plan	128
---	-----

Wood for Street Paving	177
------------------------------	-----

PARK AND CEMETERY.

Devoted to Art Out-of-Doors,—Parks, Cemeteries, Town and Village Improvements.

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CONTENTS.

EDITORIAL—ARBOR DAY AND ITS SUGGESTIVE BENEFITS—PERPETUAL CARE IN CEMETERIES	1
THE NEW YORK PARKS—CANNAS AND CALADIUMS.....	2
*A NATURAL SCENE, FOREST PARK, BROOKLYN, N. Y.	2
CEMETERY ROADS.....	4
*HORTICULTURAL BUILDINGS, NEW YORK BOTANICAL GARDEN, BRONX PARK.....	5
*THE TOMB OF WASHINGTON, MOUNT VERNON.....	6
*CEMETERY GREENHOUSES.....	7
*THE BIRMINGHAM, MICH., WOMEN'S CEMETERY ASSOCIATION AND ITS WORK.....	8
*RESIDENCE STREETS, VII.....	10
*GARDEN PLANTS—THEIR GEOGRAPHY, XXVII.....	12
*SOME RECENT FRENCH MONUMENTS	15
*MEDITATION ON MONEYWORT.....	15
THOUGHTS ON CEMETERIES.....	16
PARK NOTES	18
CEMETERY NOTES—REPORTS	19
CORRESPONDENCE.....	20
PUBLISHERS' DEPARTMENT.....	21
POINTS FOR CEMETERY OFFICIALS.....	21

*Illustrated.

MARCH is the month of eager longing to the lover of outdoor work, as it is that of intense preparation for the work to come. More than that, in these years of increasing educational effort in the direction of encouraging that innate love of nature common to the human family, it is the month of renewed activity in that direction. And this is emphasized by the first proclamations of Arbor Day observance by the governors of those states, which have by legislative action recognized the advantages of inculcating into the minds of its citizens the duty of actively responding to the enactment. To any sober intelligence the broader meaning of Arbor Day will present itself in many phases. Originally devised to make reparation to mother nature for the destructive waste and injury done to the people by the uncontrolled rapacity of the lumbermen in the wooded regions, it has expanded to promote the development of art out-of-doors. That is to say, that in encouraging the plant-

ing of trees to offset the injury stated, it has included within its meaning the planting of trees by the wayside, the planting of orchards about our farms, and the planting of decorative trees and shrubbery about our homesteads. And the spirit in which the question has been taken up by the apostles of the betterment of our people, has been already so far-reaching that in many states arrangements are being consummated that the exercises shall be made general to every schoolhouse in such States, and that both practical and theoretical work shall be accomplished on that day. The idea is so beneficent in its application, and withal so timely, that there should be a general inclination by every one interested in plant life and lovely landscapes, to give their assistance towards promulgating the principles so promising of good, not only to the individual, but to the community at large. It is a happy fact, pregnant with immediate possibilities, that the educational effort involved in Arbor Day exercises appeals to the young and to every schoolhouse, and that the soil into which the seed is scattered is naturally adapted to the production of a beautiful harvest. But our parks and cemeteries in very many localities, and more or less in all localities, also offer practical opportunities for Arbor Day exercises. Many of them, especially in the treeless regions, are bare and dismal spots, yet only awaiting an Arbor Day in the minds of those interested to transform them into gardens. Every cemetery official should exercise himself to promote to the fullest extent Arbor Day observance, for it embraces suggestiveness for all conditions. It would be the means of beautifying the burial plot as well as creating a deeper interest in its welfare. Why not suggest memorial trees, if there be no other work of the kind to be done, and an appropriate and well selected tree is fuller of meaning and significance in this age of meditation than any conventional monument.

THE advantages of the "Perpetual Care" system which has been so strenuously advocated for the past few years, is at last reaching out to the intelligence of the masses, and numbers of the small cemeteries are advocating its benefits and incorporating its requirements in their business transactions. Like all other efforts in the direction

PARK AND CEMETERY.

of radical progress, it was found that this innovation would require, not only energetic advocacy, but time to implant its suggestiveness in the mind of the average lotholder in the old cemeteries, for it called for an immediate money outlay to make it effective, which of necessity offered restrictions. But it is surely proving that once the lotowner fully grasps the true meaning of perpetual care, and its present advantages, the question of meeting the financial requirements becomes at once a matter for consideration, and can usually be met by a readjustment of little matters, which, like unto other questions of providing means for necessities, finds a solution generally quicker than was expected. The cost for perpetual care in the average lot is comparatively moderate in amount, and has been formulated in the experience of years. Once arranged for, the general care of the lot becomes the duty of the cemetery officials. Absence, forgetfulness, carelessness, or the thousand and one excuses which offer themselves in palliation of neglected duty, are offset, and the solid comfort remains that the little plot in the cemetery, which is hallowed by the profoundest consideration human nature grapples with, will be kept in order intelligently and conscientiously, and that a care, always sad, and often a burden both to thought and action by uncontrollable conditions, is lifted for all time as far as present arrangements can be made. Since the idea was first promulgated and earnest work on its establishment begun, there has never been an argument offered against its admirable opportunities, and it may safely be said no cemetery is now started without ample provision being incorporated into its laws to insure its practical operation by adding to the price of its lots a sum which is set aside, under legal restriction, to create a fund to provide for perpetual care. It is only necessary to draw attention to the improved appearance of the lots in cemeteries conducted on the lawn plan and under perpetual care, compared with those in the older portions of cemeteries left to the care of lotowners or so-called friends, to emphasize the value of this provision. It is impossible to believe that a little thought and observation on the part of all lotowners will fail to create an active sentiment to make the present rapidly advancing reform a veritable revolution in cemetery care.

THE NEW YORK PARKS.

The Commissioners of the New York Parks have made appointments for each of the principal boroughs—so that each commissioner has the assistance of at least one competent man. The borough of Manhattan which includes Central Park is presided over by Mr. N. Johnssen-Rose who is a graduate

of Kew Gardens, and has had landscape gardening experience in connection with the Manhattan Parks.

The commissioners propose to proceed with caution and avoid the kind of appointments which have led to embarrassments and mistrust in the past, but there is still danger that men who are remarkable for advertising and commercial, rather than profound and versatile acquirements, may find or force their way into the department.

As the City of New York is now constituted it embraces a wide range of conditions and characteristics in its parks, and it is to be hoped that the features may be preserved, emphasized and improved upon, and not reduced to mere ribbons of roadways through artificial woods.

The commissioners have a fine opportunity before them, and it is to be hoped they will avoid the kind of errors which the late Mr. Stiles denounced in the last commission.

CANNAS AND CALADIUMS.

The yearly increasing popularity of these plants for ornamental planting is marked. They are effective either for grouping on lawns, or hiding unsightly spots. It seems almost impossible to place a bed of cannas alone, or fringed with caladiums, without being an improvement to the surroundings.

To gain the earliest and best results, they should be planted, as early as possible in hot beds. These latter are easily and cheaply made and for our purpose glass is not necessary. Boards, mats, or anything that can be removed for an hour or so during the sunshine will answer the purpose. After all danger of scalding by the heated manure has gone, place the tubers upon the surface, which of course has been tramped down firm, and then cover with four inches of soil.

When gentle spring has surely arrived, the tubers can, by the exercise of a little care be readily removed to their summer abiding place.

By the adoption of this method quite six weeks can be added to the usefulness of cannas and caladiums.

B. L.

A NATURAL SCENE, FOREST PARK, BROOKLYN, N. Y.

There is something very refreshing and satisfying in natural woodland, with all its wonderful display of nature's handiwork in her subtlest manipulation. Added to this is the varied charms of light and shade, playing their weird pranks with the graceful leafage, making and creating pictures of marvellous attractiveness to the thoughtful mind on every hand. The cool shades, the rustling foliage, the magic sounds and voices always heard in the woods, something new at every step and the com-



A WOODLAND PATH—FOREST PARK, BROOKLYN, N. Y.

forting sense of peace and rest which always pervades one in the full enjoyment of a woodland wander, add force to the idea that every park system should be provided with a certain proportion of wild park to make it complete, and to fill the requirements of perfect harmony of design as suggested by the higher aspirations of man's nature. For after all, the most artistically arranged park,—its details provided after the most approved practice, with the choicest array of plants and flowers and the most refined of landscape effects—fails to impart that peculiar satisfaction and restful condition of being which the quiet woods tend to produce. The one lends completeness to the other—helps to fill out a blank which human nature demands.

The scene shown in the accompanying illustration gives us a little stretch of wood scenery, with much suggestiveness in its unkempt disorderliness. The view is taken in Forest Park, Brooklyn, in one of the more recent tracts acquired for park purposes, and it is designed to retain some of these patches of woods in as near a natural state as is compatible with proper care and preservation. And what is more charming under certain conditions than this woodland path, with its carpet of leaves and mosses, its overarching boughs,—triumphal arches of na-

tures making—not commemorating the questionable deeds of man, but inviting to contemplation, and teaching lessons inextricably interwoven with man's higher aspirations and most certainly with his earthly destiny.

Doubt having been expressed as to whether the remains of Voltaire and Rousseau really occupied the coffins attributed to them in the Pantheon, Paris, a commission was appointed by the French government to verify the matter, which early in the new year made the examination. On opening the coffin of Voltaire the bones were found in disorder, but intact. The skull was in a fine state of preservation, and resembled in a striking way the portrait of Voltaire in his withered old age, by Pigalle. Inside the coffin of Rousseau was a leaden receptacle, which, on being opened, disclosed the skeleton of Rousseau in a perfect and undisturbed condition. M. Hamel summarized the results of the inquiry as follows: "It has been said that the bones of Voltaire were never deposited in the Pantheon. This is an error. It has been said that the bones of Rousseau remained at Ermonville. This is an error. It has, furthermore, been said that Rousseau was killed by a pistol shot. This is a third error. We have this evening ascertained the truth on these three points." This report will set at rest considerable speculation in regard to the final disposition of the remains of these two noted Frenchmen.

CEMETERY ROADS.

In the following remarks it is the intention of the writer to deal with the question of roads only as they are related to cemeteries, because the conditions are different to those pertaining to a park or public road. That is to say, the travel can be regulated more to light vehicles, and as for the monument laden wagon it can be restricted to dry weather. There are to-day numerous articles and books on the subject but when applied to many of our cemeteries they are useless. This may be said especially so in the matter of the smaller places. And why? Because of the great cost of construction. Yet one fact always before us is that a most essential feature of cemetery improvement is good roads.

To use the words of a well-known superintendent: "there is nothing that makes a lot holder so satisfied with a place as to be able to reach his lot without having to traverse a muddy road."

Then there is the undertaker; and it must be borne in mind his recommendation is an important one. He likes to bring people to a place where his carriage does not plow through the mud. I have in mind a very beautiful cemetery where great taste is shown in the arrangement of trees and drives; but although the association have some thirty acres improved no attempt has been made to construct permanent roads. I have heard people say, "what a pity such a beautiful place has not better roads." It is well for the association that there is no competition.

Of course I realize that on good roads alone you cannot have a beautiful cemetery, yet at the same time I wish to impress upon the readers of PARK AND CEMETERY some of the important reasons for good roads.

In regard to construction. In the first place let the superintendent look about him and see what is available. Don't do a thing because you have found some other cemetery doing the same. It may be too expensive to apply to your place. In some parts of the country very valuable material is wasted. There is a cemetery not many miles from New York where they construct their roads thirty inches deep on a sandy soil. Such expenditure is literally throwing money away. One-third the depth would have been ample under the existing conditions. In most cemeteries more or less stone is to be had, but in many cases it is not fit for a finished road because it is too soft, and is soon reduced to mud. Now if that same stone was used on edge for a foundation it becomes valuable. In some localities there are plenty of coal ashes to be had for hauling. Now take the stone mentioned above for a foundation in

a twelve to fourteen inch excavation for your road-bed. Fill in enough ashes to leave about four inches space unfilled and roll well. After which buy crushed limestone or what ever is available and finish the remaining four inches. A mistake that is liable to be made here will be to put about two inches of one or two inch size and two inches of screenings. It will be found to be far more lasting if the four inch space is almost filled with the larger size stone and just enough screenings used to fill in the crevices. After the above operation the whole road ought to be again well rolled and if a sprinkler is available it will help matters if the road is wet thoroughly. A road so treated will wear well for cemetery purposes. Where the soil is light and the drainage good, the bottom stone can be dispensed with entirely. A noticeable feature of a road built as described above is that the surface has less tendency to grind into mud. The explanation lies in the fact that the ashes act as a cushion for the top. Some authorities advocate the use of clay in connection with road construction, but I think that a great error. Clay is too expansive in its nature and in consequence in the spring time when the frost is leaving the ground the clay will work out from between the stones.

Perhaps it may not be out of place to say something on the subject of gutters. They should never be used where they can possibly be dispensed with for various reasons. But some sort of an outline for the edges of a drive is a great help to preserve the neat appearance in the future. If any material is used for that purpose such as asphalt, brick or paving stones they should not protrude above the surface of the drive in the nature of a curb, but should conform to the contour of the road.

Bellett Lawson, Jr.

HORTICULTURAL BUILDINGS, NEW YORK BOTANICAL GARDEN, BRONX PARK.

The horticultural buildings for the New York Botanical Garden at Bronx Park will comprise thirteen houses, covering an area of some 45,000 square feet. The accompanying illustration and description we take from *The Florists' Exchange*.

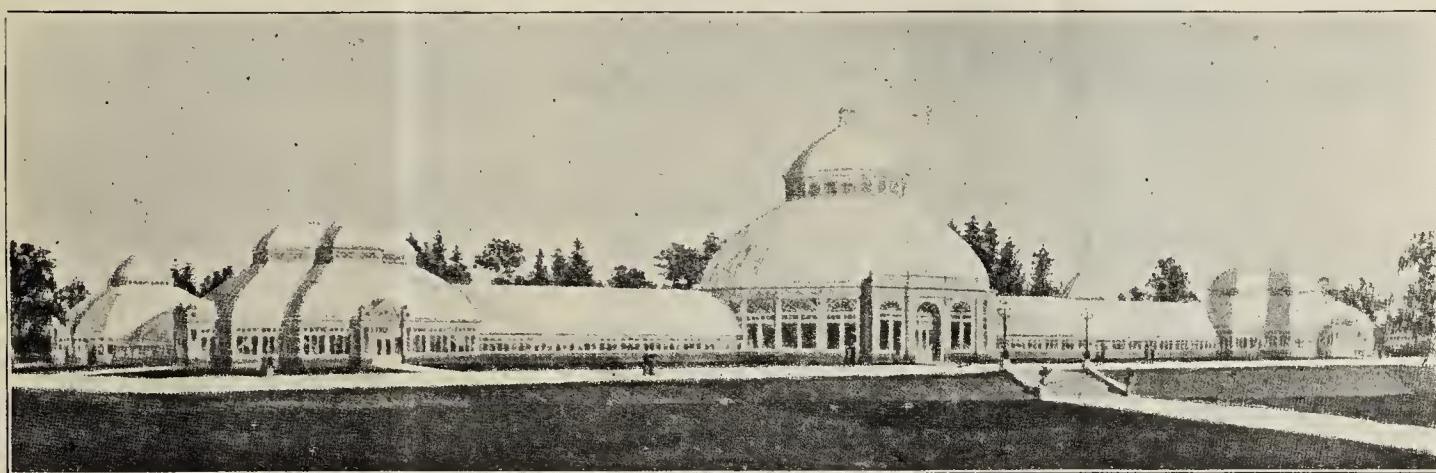
The central feature of the range is a palm house, circular in form, 100 feet in diameter, and in height about 90 feet from the terrace level to the finial of the upper dome. From either side of this house, running east and west respectively, are two connecting wings, each divided into compartments, the dimensions of these wings being about 30 feet wide by 116 feet long. In height they are about 12 feet to cornice line and 26 to the ridge. At the ends are placed houses in the form of a cross, with lanterns

on roofs, about 84 feet wide, 16 feet high to main cornice, 38 feet high to lantern cornice, and 46 feet to ridge. Running south from these are two other low connecting houses, 30 feet by 75 feet each, at the ends of which are two square houses with cut corners, 50 feet in diameter, and 35 feet high to top of domes. Running east and west from these are two low houses with octagonal ends, in size about 38 by 103 feet each. The front elevation of the range is about 500 feet in length; the side elevations are about 210 feet in length.

The houses inclose a large court, which is ap-

of temperature and humidity can be regulated to suit the numerous requirements of different plants. The walks through the houses will be commodious, sinuous in the larger houses and straight in the smaller ones. The floor areas in the larger houses will be treated naturally, and vistas can be arranged from many points.

The central palm house will accommodate the largest specimens of palms and other tropical plants, and the commodious interior will admit of a very effective natural treatment. The smaller connecting houses can be used to great advantage for the dis-



HORTICULTURAL BUILDINGS, NEW YORK BOTANICAL GARDEN, BRONX PARK.

proached from the south. This court will be utilized for aquatic planting and other ornamental features. The main entrances are located on the north and south sides of the palm house, and have commodious inner vestibules. Auxiliary entrances are located at various other points. Three of the houses have cellars under them, aggregating about 8,700 feet of cellar space, thoroughly drained, lighted and ventilated. The houses will stand upon a broad terrace, and will occupy a commanding position. The style is modernized Italian renaissance.

The buildings will be practically fireproof, being constructed mainly of iron and glass, resting on solid masonry. The outer facings of the foundation will be fine cut Bedford and Blue stone. The details of the exterior face of the superstructure will be carried out mainly in copper and cast iron.

The heating will be under perfect control, admitting of a temperature in every building of 70 degrees Fahrenheit during coldest weather. The heating mains will not be exposed in the houses, but will all be carried in underground trenches.

The watering system will be comprehensive, two sets of mains for both hot and cold water will supply each combination hose bibb, so that hot and cold water can be drawn to any variation between, at any point in the range. The system of ventilation will be ample and so arranged that conditions

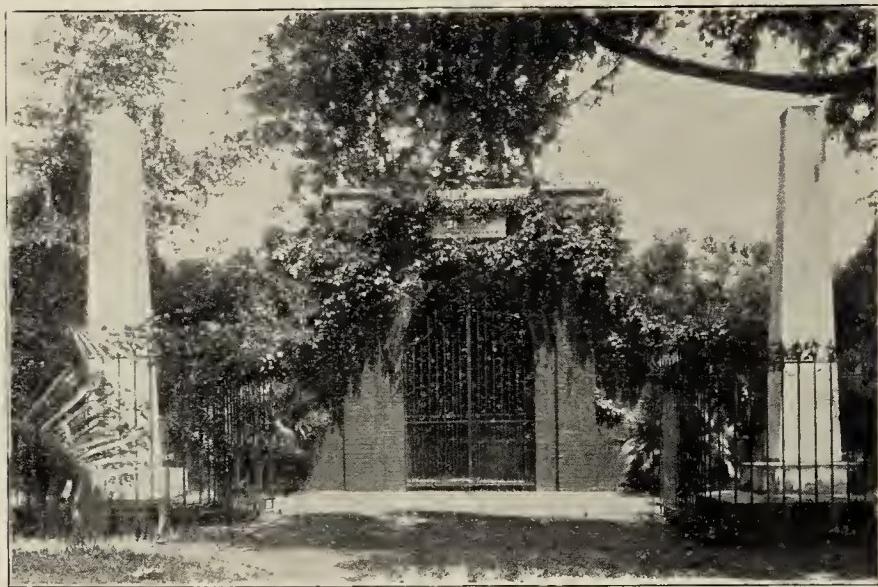
play and growth of various classes of plants; there being six of these compartments, a wide treatment can be employed. The large cross houses can be utilized to good purpose as a cool palm or fern house, and a house for the growth and display of tropical fruit and an economic collection and for various other uses. The two square dome houses can be used for a collection of cacti, etc. One of the 38 feet by 103 feet houses has a pond occupying the entire area, excepting for a border a few feet wide around the sides; this will provide for a fine display of aquatics. The other 38 feet house will provide a display or exhibition house.

Queen Victoria has recently paid a touching tribute to the late Mrs. McDonald, an old servant, in Crathie churchyard, Scotland. It is a tomb consisting of two handsome blocks of red Peterhead granite, on the top of which is carved an interlaced Celtic cross. The following inscription is cut in raised polished letters: "This stone is placed by Queen Victoria in grateful and affectionate remembrance of Annie McDonald, daughter of William Mitchell of Clachanturn and widow of John McDonald. She was in the queen's service for forty-one years, and during thirty-one years was wardrobe maid and the faithful servant and devoted friend to the queen by whom her loss is deeply deplored. She was born at Carn-na-Cuimhne, Jan 3, 1832, and died at Clachanturn, July 4, 1897, beloved and mourned by all who knew her. 'Let her own works praise her.' Proverbs, xxxi, 31. 'Nothing in my hand I bring; simply to Thy cross I cling.'"

THE TOMB OF WASHINGTON, MT. VERNON.

Although it had been my desire for many years to visit Mt. Vernon, the home of Washington and his last resting place, it was not until recently that the opportunity came to me.

Many of the readers of PARK AND CEMETERY have been there and those who have not, know it is situated on the banks of the Potomac, about fifteen miles below Washington; the electric car route from Washington, ensures an interesting ride though a pretty agricultural country, passing on the way



TOMB OF WASHINGTON AT MOUNT VERNON.

through Alexandria, a place familiar to every one who lived in the stirring days of "the war." Here it was that Col. Ellsworth was shot by an enthusiastic admirer of the confederacy, and, as the cars passed through the town, many recollections of war times came crowding on me. Mt. Vernon can be reached by boat as well as by electric car, and in the days of summer the river route is a very popular one.

The grounds of Mt. Vernon are prettily situated. The mansion is on an eminence, sloping to the river, which appeared to me to sweep around it considerably, so that the water was visible at many points. The grounds do not contain trees or shrubs of variety. Planted so long ago, there is but little variety as we consider it to-day. Two very fine magnolia grandifloras stand on the southern side of the mansion, and here and there about the grounds were some of the best Picea pinsapos I have seen in the country. This is a Spanish evergreen, which is barely hardy north of Philadelphia. There were, too, some very large trees of the Pacific coast evergreen, Libocedrus decurrens; and it was a pleasure to know that the lovely crape myrtle, Lagerstræmia indica, was perfectly at home there.

A path from the mansion towards the river

brings one to the face of a large natural woods, and here is situated the tomb of Washington.

How it thrills one to gaze on the tomb of the illustrious dead! It had been my desire for many a year to stand before the tomb of this great leader, whose sole desire through life had been the firm establishment of the independence of his country. When this was secured his work was done, and with no thought of self, he retired to Mt. Vernon.

Byron, in his "Ode to Napoleon," pays the following tribute to Washington:

"Where may the wearied eye repose,
When gazing on the Great;
Where neither guilty glory glows,
Nor despicable state?
Yes—one—the first—the last—the best—

"The Cincinnatus of the West,
Whom envy dared not hate,
Bequeath the name of Washington,
To make man blush there was but one!"

It was with great pleasure I was able to secure the photograph of the tomb and its surroundings for the readers of this journal.

It is beautifully situated. In its front is the woods spoken of, through which runs a winding path to the river. On the other side is the pleasure grounds, and about the vault are many specimens of native trees.

The tomb on the right, to be seen through the enclosure, is that of Washington, that on the left is of his wife. The tablet over the gate of the enclosure reads:

"Within this Enclosure
Rest
the remains of
Genl. George Washington."

Outside the vault the two columns are conspicuous objects. The one on the left hand contains the following inscription:

"His mortal remains are interred within the Vault, and this humble monument to his worth, His purity and unostentatious excellence in all the relations of Life is erected by his widow."

The right hand one reads:

"This humble monument to the memory of the venerated Judge and his beloved Wife, is placed here by her Niece, the Widow of his Nephew, John A. Washington."

The vines which are entwining themselves about the vault are the Japanese and Virginia creepers on both sides. The large tree, the arm of which overhangs the vault, is the black Walnut, Elm and Euonymus atropurpureus are also in view towards the left.

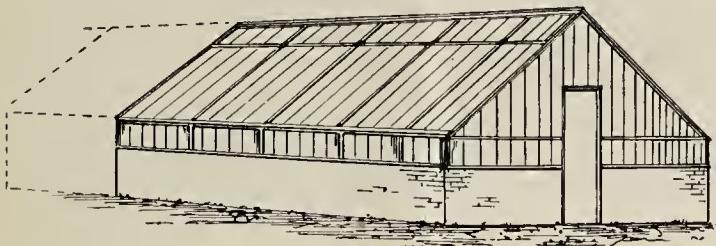
Joseph Meehan.

Tulips are cultivated in Constantinople, and there is a tulip festival there once a year in spring. Every palace, room, gallery, and garden is decorated with tulips of every kind. At night there are illuminations by colored lamps and Bengal fires.

CEMETERY GREENHOUSES.

Whether greenhouses form a profitable department or not, is a debatable matter. But one thing is certain. They are a convenience to the lot owners, and other patrons, many of whom reside a considerable distance from the cemetery, and do not wish to be put to the trouble and expense of conveying plants and flowers so far, and this reason alone, is a strong argument in favor of cemetery greenhouses.

There is also an increasing tendency among officials to make our cemeteries more ornamental. This



fact is more noticeable in the smaller towns, the inhabitants of which occasionally visit the large cities, and have opportunities for seeing some of the best conducted burial grounds. This naturally creates a spirit of emulation, and the result a desire to improve local affairs.

Frequently in small places there is a difficulty in obtaining plants, and often prices charged by local dealers deter officials from doing as much ornamental planting as they would like.

Now-a-days it is not a very difficult or expensive matter to put up a greenhouse. Such structures can be built to suit the finances of almost any cemetery. The outline sketch which we give, will do either for a full or a $\frac{3}{4}$ span house, which can be lengthened at any time as desired. For all practical purposes a $\frac{3}{4}$ span house is sufficient and a little cheaper to build.

There is not much economy in putting up too small a house; a nice size is 40 ft. by 20 ft. or 60 ft. by 20 ft., either will prove to be a useful size. These will give an 18 ft. interior, which space can be divided in the most profitable manner. 3 ft. benches, with paths 2 ft. wide. At the present time material for building can be had at low figures, and nearly all the requisite parts for a greenhouse can be obtained from the firms in that line, whose advertisements appear in the columns of PARK AND CEMETERY.

The lower walls can be constructed of wood, brick or stone; but the two latter are preferable and at the present prices are almost as cheap as wood.

To many, the stocking of a greenhouse seems an expensive matter. But really it is not. A few dozen plants put out of doors in the spring will yield an abundance of cuttings in August and September.

These can again be cut without spoiling the plants in early spring and make strong and thrifty plants for out door work the next summer. Beginners are apt to fill their houses with all kinds of plants; this should be guarded against, and only such as will prove useful and necessary for out door planting be propagated. This will permit of the house being emptied and cleansed. It is astonishing how soon a place can be filled by the judicious use of a few good stock plants.

B. L.

Planting Cactuses.

With the advent of February it is time to think about repotting cactuses where needed, and getting them started for summer growth. It is very seldom, indeed, that repotting must take place, and such times can only be determined by judgment and experience. Comparatively young plants will naturally require more frequent potting than older ones. The amateur is more apt to err on the side of frequent potting, as it does seem unusual to cramp the roots as it is necessary to do with this curious class of plants. In many cases it is only necessary to shake the soil from the roots and replace (in same pot) with new soil. This method is advised wherever possible, and the repotting may then be done more frequently, giving the amateur the necessary experience as to increase of root in a given period. Any roots that appear dried or dead should be cut off close to stem, and in potting care should be taken to have the roots spread out as much as possible, and not bunched. A dull-pointed stick would be useful for packing the earth well around the roots, which is very essential.

As to the proper potting soil there are slight differences of opinion. The chief necessity is to have thorough drainage, without which the plant will rot off at the base. Gravel placed in the bottom of the pot, or coarse sand, will make a good drain. Lime rubbish is recommended by some, but rejected by others. In small quantities it is doubtless beneficial, especially in the case of the strong-growing kinds, as *Cereus*, *Opuntia*, etc. Given thus in moderation it tends to sweeten the soil without absorbing too much moisture. Small pieces of brick are sometimes used to aid drainage, but it is not to be encouraged, as while it loosens the soil, it also absorbs the moisture and retains it, making a damp soil. Powdered charcoal, sand and ordinary good loam may be added in equal parts. Leafmold is used by some, but it is apt to sour.

After potting at this season, presuming that the plants have been kept cool and dry during the winter months, they should be introduced to gradual heat and water increasing as the season advances. For the stronger growing kinds liquid manure may be beneficially applied. At all times plenty of light is needed—place them near the glass, if convenient. Regularity in temperature and watering is very necessary for good growth. While handling them at this time it would be as well to carefully look for insects that may have escaped notice during the winter. A little attention this time will save increased work in a busier period.—*Meehan's Monthly for February*.

PARK AND CEMETERY.

THE BIRMINGHAM, MICH., WOMEN'S CEMETERY ASSOCIATION AND ITS WORK.

The improvements effected in our large cemeteries during the past few years in harmony with the higher ideals encouraged and fostered by adepts in landscape work and far seeing cemetery officials, set the pace for general improvement in all cemeteries of sufficient magnitude to include available income and organized methods of conducting business. And it is quite certain that this improvement must continue, for the contrast between the new and the old is so much in favor of the former, that no sensible community having knowledge of it could be expected to tolerate the latter a year longer than is necessary.

But between the private graveyard on the farm, up through the little plot of the country hamlet or village, or the larger burial ground of the small town, to the modern city cemetery, there has been a large field to cover and with many variable conditions to meet. The methods which prevailed in these smaller places were such as looked little farther than present accommodation for inevitable events, and hence failed to take into account the ultimate requirements of the burying ground in its relation to the community. There were no means of impressing the peculiar appropriateness of beautifying the graveyard upon those in authority over such matters, and to individual effort and taste was left the work of making or marring the small burial plot. And this generally led to utter neglect, a condition still prevailing in most cases over our land.

But the facilities for travel, the widespread desire for knowledge, the growing influence of a higher national life, which is the distinguishing feature of the past decade or two, has been finding expression

crying for improvement, has been receiving more of that attention which it always undoubtedly deserved, and which the best interests of the community demanded as a record of their status.

In some instances the problems connected with their improvement and care have been solved by concerted action on business principles on the part of the authorities interested. In a few others Improvement Societies have taken the cemetery in hand and are working to its betterment. In a case we are about to describe a body of women a few years ago banded together in a cemetery association, independent of other affiliations, and for the sole purpose of redeeming the old cemetery and adding to its area. And this is in the pretty village of Birmingham, Michigan, a place of about 1000 inhabitants, eighteen miles north of Detroit. Mrs. M. Baldwin of the Birmingham Cemetery Association gives us the following information:

"Seeing the need of some organized work for the care of the cemetery the women of the village incorporated a society for that purpose. Our members were few, and the outlook poor. The most we hoped to do was to have the grass mown once a year, or at most to keep a man there one day in the week. These are some of the things we have done: We have planted hundreds of trees and shrubs, taken down the board fence in front, lowered the posts, and planted at each one ivy or wild clematis, so that they are entirely covered; from post to post we carried a chain. We have put up a wind-mill that raises water from a creek near by and distributes it all through the grounds in iron pipes, and established nurseries in which we raise our own trees. We have bought four acres for an addition and have plotted it on the lawn plan; we have placed numbered marble corner posts at the corners of each lot, in all the new part, and have adopted the modern rules in regard to headstones, enclosures, etc., which we enforce.

"We now keep a man on the grounds all the time during the summer season, and often more than one. It is as far as I know the only cemetery in the state outside our cities where the landscape gardening plan is adopted and its rules followed.

"The association is incorporated under the laws of the state, which enables it to hold property.

Each lot owner is expected to contribute one dollar per year towards expenses, but in cases where no one is left to care for lots in which have been bur-



VIEW IN CEMETERY AT BIRMINGHAM, MICH.

in increased activity towards the improvement of external surroundings in our country and village life, and the unkempt, disorderly cemetery, so long

ials the society takes charge of it; on the other hand should there be remaining relatives of lot owners who decline to contribute for the care of such lots the society simply lets it alone."



ANOTHER VIEW IN CEMETERY OF BIRMINGHAM, MICH.

So far as the general welfare of the cemetery is involved this is the weak spot in the management, as it is in all such cases; and all things considered it would be better to care for such lots, using every possible inducement to secure help from those from whom it should come, and trusting that the educational influences excited by the good work will eventually induce reform.

A committee is appointed to collect such subscriptions, which as yet do not equal expenses, so that a draft has to be made on the funds received from sales of lots. But there has been sufficient receipts to enable the society to form a sinking fund.

The old ground comprised only two acres, to which has been added four more, but it is the care of the old ground that cuts up the income, and no funds are contributed towards its care by village.

It is interesting as bearing upon cemetery development by the women to note some further details as described by Mrs. Baldwin:

"When we were ready to construct the drives in the new part, we took balls of carpet-rags, because the bright colors and the white could be more easily seen, and laid out a driveway, staking the strings here and there to hold them. We then measured the width of the road and staked some more carpet-rags on the other side. We made curves and points to suit our fancy. Then we had a bee and invited the men to come with teams, plows, scrapers, drays, etc., and before night our drives were made. We served the dinner under the trees. We employed a surveyor to lay out the lots and make a plat. We divided the new ground into five sections, in some of which the lots are 12 ft. by 20 ft., in others 20 ft. by 20 ft. Along the front we have planted the five leaf ivy, a root at each post; it covers posts and

chains in many places and at the fall season is a blaze of color.

"The payment of \$25 secures the perpetual care of a lot and this sum is placed in the bank in a separate fund and draws the interest only.

"All fractional lots are reserved as ornamental ground. A long lane, or drive, leads from the main road to the grounds, and at the entrance to the cemetery we have a wooden arch covered with vines."

The accompanying illustrations add interest to this description. It will be observed that the fence can be much improved by a more profuse planting of vines to fill up the gaps.

The society is composed of and entirely controlled by women, and they will be glad to assist sister organizations in other places with their experience in a work, which is in the highest degree commendable, and of which there is such crying need in so many communities.

For ornamental bedding the Acalypha is bound to become more popular as it becomes better known. Its foliage is very showy without being gorgeous. The colors are as bright as the best of Coleus, and the plants are much harder and not liable to wilt in the hottest and driest weather. The beauties of the Acalypha were appreciated by those who attended the last two conventions and had opportunities of seeing beds of this plant at St. Louis and Dayton.

A few pips of common asparagus, will form a very pleasant feature in the ornamental planting of your grounds. In any nook, or at a corner where an ornamental bed cannot be made, put in half a dozen pips of asparagus. It will require no care or attention and the effect during summer will be charming. Try it.

Cemetery superintendents do not sufficiently appreciate the usefulness of hot-beds for getting things ready for summer planting. Annuals can be sown in boxes and transplanted, gaining a lot of valuable time; and where greenhouses are located hot-beds are invaluable for hardening off plants ready for outdoor planting. Make a heap of a few loads of fresh horse manure, well trampled, and left about three feet high; then cover with, say, four or five inches of soil. In a few days the superabundant heat will have evaporated and the bed be ready for sowing. The sides and ends can be made from 2-inch plank 18 inches at back and 12 in front. Sash frames can be had from firms advertising such material in this journal.

RESIDENCE STREETS.—VII.

PLANTING.—*Continued.*

THE PARKWAYS.

These are the strips of ground along each side of the roadway, which separate it from the sidewalks. On ordinary streets they vary in width from a band so narrow that one can step across it, to sixteen feet or more. The treatment of these spaces has usually been left to the taste of the residents. As a result these parkways have often been entirely neglected; in some cases covered with grass; and in others the grass has been mown and watered, the care given being essentially the same as that of the front yard. Often no trees at all are planted, and again, elms or maples have been placed not more than twelve or fifteen feet apart. If we go to some of



FIGURE 8—Showing a Street with Sidewalk much higher than the Roadway, with no difficulty arising therefrom. The appearance would be improved if the slope were covered with shrubs.

the older cities, we can see what has been the result of such treatment. Nothing could be more satisfactory than some of the streets in the older towns of New England, where our American elms reach from each side until their branches meet overhead, and where the houses are placed so far back that they are not too shaded. Again, where large growing forest trees of various kinds have been planted, and these are the ones almost invariably used, the foliage has become so dense that the residents, in order to get light and air, have trimmed the branches up above the second story of the houses. In passing along such streets, one ordinarily cannot enjoy the beauty of the foliage, but sees, instead, the trunks of the trees covered with great scars where large branches have been, from time to time, cut away. Such an effect certainly should be avoided.

Probably all will concede that the most satisfactory results are to be attained only by designing the planting of the parkways as a whole, especially if such a design is made after a study of all the various requirements. I think that physicians as a class, and many others from personal experience, will say that the most important thing of all in such streets, is that sunlight should be allowed to reach the windows of the houses. Next in importance, after the comfort of good roads and good walks, is the beauty of the street as a whole, and then of its various features in themselves. The first requirement would prohibit the continuance of the line, or belt, of maples, lindens, elms, sycamore, or other forest trees, on each side of the roadway, unless the building line is some distance away. The south side of an east and west street would be the most favorable location for trees of this class, but groups might be arranged in other places without completely shutting out the sun. All trees of medium size, such as the iron wood, flowering dogwood, Juneberry, red bud, sassafras, blue beech, various thorns and crab apples, have generally been neglected when selecting trees for street purposes. All of these have attractive foliage, and some of them beautiful flowers and fruits. They might add much to the variety and picture-like character of the parkway and would seldom be objectionable from growing too high.

The many charming effects along country roads have been pointed out by such books as Gibson's "Highways and Byways," and Matthew's "Familiar Features of the Roadside." These writers apparently derived as much pleasure from seeing the various dogwoods, viburnums, prickly ash, hazel, grape vine, Virgin's bower, goldenrod, lupines, wild roses, blackberries, and hundreds of other plants, as from meeting old friends. How delightful it would be if the same pleasure could be had by all in their daily walks; and I see no reason why most of the plants just mentioned, and many others, should not be used to brighten city or suburban streets. In the ordinary parkways there is plenty of room for them to grow. They are in no one's way. They keep their foliage where it will be seen. They please us with their swelling buds in spring, their varied foliage in summer, with their flowers and fruits, and their way of holding the snow in winter. It is less trouble to

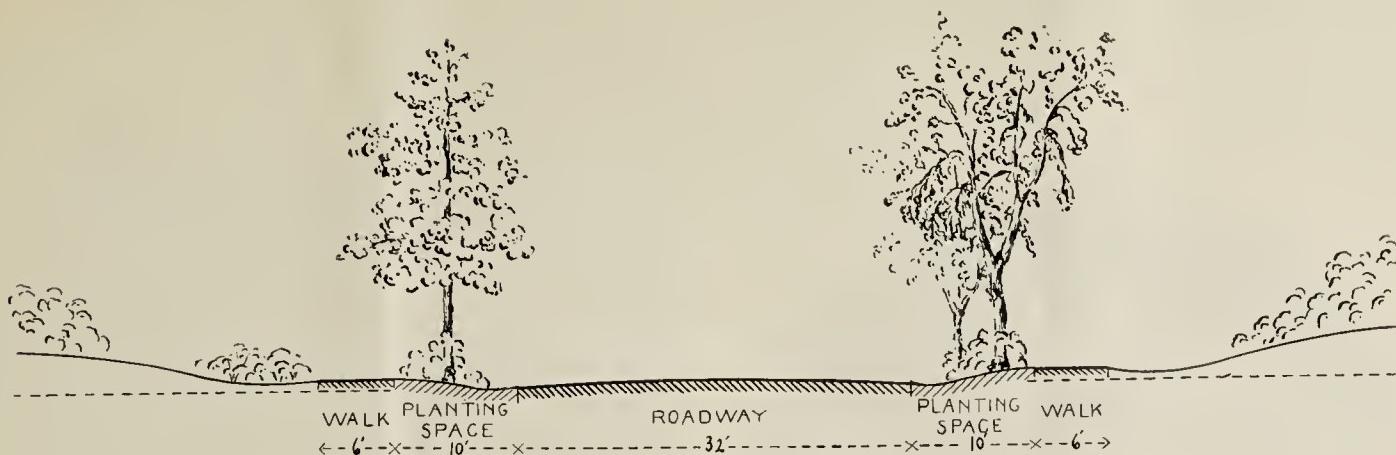


FIG. 9—SECTION OF A TYPICAL STREET.

care for them than to mow the grass. I wish I might include in the list of desirable plants our various violets, trilliums, adders tongues, hepaticas, lilies, gentians, and all other flowers we are so glad to see in our strolls through the country. The window of a railway car is an excellent place from which to study what might be used. One does not then have an opportunity to pick the beautiful flowers he sees, and so they are left to grow year after year. They will grow quite as readily near our homes if given a chance. Among the flowers of which I have seen large areas that made me wish that the train would not go so fast, are many of those already mentioned, of which I recollect particularly, wild roses, our native lilies, lupines, painted cup, some of the milkweeds, golden rods, gentians, elderberries, and our wild sunflowers. I admit that we are not yet sufficiently cultivated to enjoy all the beauty that one can imagine, but I believe the time has arrived when

beautiful in themselves and make the parkway picturesquc, but they help to give seclusion to the residences on either side and also to the walks, and even to the driveway. We live too close together in our cities, and anything that tends to separate us a little more should be encouraged. I heard Prof. Allen say that, on the average, families in cities become extinct in three generations. The cities have to be replenished with people from the country, as well as supplied with the various other products of the farm. May it not be possible, that by bringing in a little of the beauty of the country, and by so arranging the things we plant for this purpose as to give a little more seclusion, we may add not only to the enjoyment of our citizens, but also somewhat to their vitality. *O. C. Simonds.*

One of the curious forest growths of the Isthmus of Panama and Lower Central America in general is the vine which the Spaniards call matapalo, or "tree-killer." This vine first starts in life as a climber upon the trunks of the large trees, and, owing to its marvelously rapid growth, soon reaches the lower branches. At this point it first begins to put out its "fcllers"—tender, harmless-looking root shoots, which soon reach the ground and become as firmly fixed as the parent stem. These hundreds of additional sap tubes give the whole vine a renewed lease of life, and it begins to send out its aerial tendrils in all directions. These entwine themselves quietly around every limb of the tree, ever creeping to the very farthest tips and squeezing the life out of both bark and leaf. Things go on at this rate but a short while before the forest giant is compelled to succumb to the gigantic parasite which is sapping its life's blood. Within a very few years the tree rots and falls away, leaving matapalo standing erect and hollow, like a monster vegetable devil fish lying upon its back with its horrid tentacles clasped together high in the air. Core-like arbors of matapalo are to be seen in all directions, each testifying to the lingering death of some sylvan giant that formerly supported it.—*Information.*

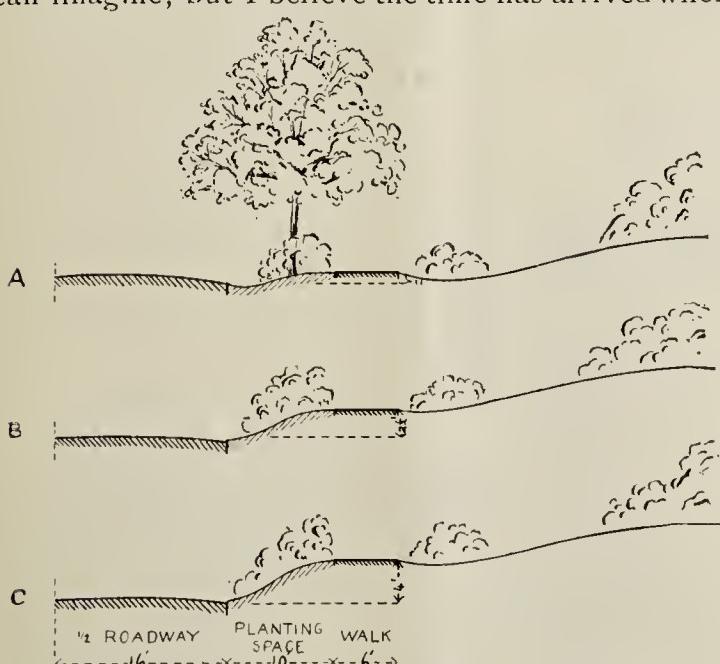
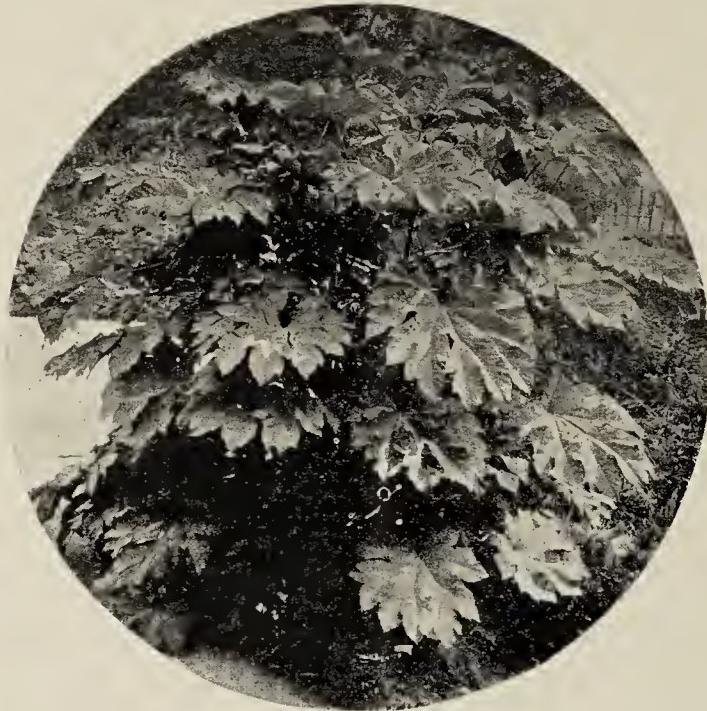


FIG. 10—SECTION OF A TYPICAL STREET, SHOWING SIDEWALKS AT VARIOUS GRADES.

we can make use of a far greater variety of plant growth than we are accustomed to see along our street borders. The common shrubs are not only

GARDEN PLANTS—THEIR GEOGRAPHY, XXVII.

UMBELLALES.

THE HYDROCOTYLE, ARALIA, AND CORNUS
ALLIANCE.FATSIA JAPONICA.—*Gardening.*

Fatsia has three species, two from Japan and one from Northwestern America. *F. Japonica* has two or three variegated and varying forms. These are fairly hardy in the Southern States and in the south of England. The specimen we illustrate is reported to have stood four or five winters at Washington, D. C. *F. papyrifera* is the true rice-paper tree, a native of Formosa, and more tender than the others, but doing well at southern points, especially in Southern California. *F. horrida* is found not only in the Northwest United States, but also in Northeast Asia.

Didymopanax is in two species, one from Japan, the other from the Himalayas, and some of the authorities give a third species from Mexico.

Helwingia is in two curious and seemingly anomalous species from the same regions. The flowers are borne on the midribs of the leaves (much as in *Ruscus*), but approximate in structure to plants of this tribe.

Trevesia is a genus of small and slender trees with large, handsome foliage, growing in four species in India and the adjacent islands. The plant known as *Gastonia* in cultivation and having curious umbels of yellowish flowers growing from the stems below the leaves is *T. palmata*. It ought to be a good sub-tropical plant in shady places.

Elentherococeus is also monotypic, a native of China, and hardy in the south of England.

Heptapleurum is a more extensive genus of fifty

or more species, natives of the Himalayas southwards through tropical Asia, Africa, the Pacific Islands and Australasia. *H. impressum*, from the Himalayas, is in European gardens and hardy in the south of England. *H. venulosum*, also East Indian, is sold as *aralia digitata*.

Hedera has but two species accorded it, one the well-known and very variable northern plant, the other Australian. There are seventy or eighty well-marked forms of *H. Helix* in cultivation, and properly used they are handsome plants indeed. The common forms do well on trees in Central New Jersey, and are superb at the South. There used to be a splendid specimen of "argenta marginata" (if I remember right) growing on the northwest corner of the Smithsonian at Washington, and it is perhaps at about that latitude that the finer forms have their limit of usefulness. At any rate the Veitch's of Chelsea sent a splendid collection to the Philadelphia Exhibition in 1876, and particular inquiry at Fairmount Park last year failed to reveal them. Where they do well they should be grown as specimens, studded over a groundwork of the common kind, and supported on rockwork or balloon frames of wire. The ordinary forms endure well on walls as far north as Yonkers, N. Y., while as trailers on the ground, especially under the shelter of larger growths, they are good to the Lakes. The "tree ivies" are shrubby kinds propagated from fruiting branches, such as *H. H. chrysocarpa*. One of the ivies appears to have naturalized in Northern California.

Marlea is in four or five species, from tropical and sub-tropical Asia and its islands and the cooler parts of Australia. *M. plantanoides*, from China and Japan, is in cultivation.

Curtisia faginea, "Assegai wood," is a monotypic small tree from South Africa. The wood is hard as dogwood and elastic, and



CORNUS MAS VARIEGATA.* CORNUS FLORIDA, FLORA RUBRA.

*The flowers of this species are produced before the leaves.

used for furniture, felloes, and the shafts of the famous Zulu Kaffir "Assegahais." It would probably succeed in California.



CORNUS KOUSA.

Cornus, "dogwoods," are in twenty-five species, from Peru, Mexico and temperate North America, the Himalayas, temperate Asia and Europe. The Himalayan, Mexican and Peruvian species are mostly evergreen; so also are some of the Japanese kinds under sub-tropical conditions. The most familiar trees and shrubs are deciduous and remarkable either for showy involucres, handsome summer variegated, and brilliant autumn foliage, or deep red and yellow bark offering admirable contrasts to the snows of winter. Several bear showy fruit, and some few are herbs. The best variety of *C. Florida* with pink bracts was found by me in an old garden in Columbia, S. C., in 1876, and was collected by General Preston many years before; I took infinite pains to get this really deep pink form into commerce, and sent hundreds of grafts to one firm—only to be disappointed—for nothing grew but the stocks. Subsequently my friend Trumpy of Flushing did better and got a few grafts started about 1880, only to be destroyed by a weeding boy, who thought "they were too small and no good." I also several times tried to get Mr. Berkman of Augusta (and others of the South) interested, but he always said he could not succeed in getting plants from the old Preston tree. The form at present in commerce has larger, but much lighter-colored, bracts. A great many handsome variegated forms of the Asiatic and European species are in gardens, but our American kinds do not seem to have yielded many. The variegated *C. Mas* in particular is very handsome, and bears fruit as freely as the green form. Of the latter the finest I have seen in America is in New Jersey,

planted by Downing shortly before his death.

Aucuba has four or five forms in the Himalayas, China and Japan, and these during the last thirty years have broken into a multitude of varieties; about that time ago the male form was received in British gardens, and it was quite a fad with cultivators to set a flowering male plant on a stand above the female plants, introduced seventy or eighty years before. In this way the large bushes had their flowers fertilized, and bore an abundance of berries among their ample and handsome foliage. These berries, when sown, germinated and sported into a great many forms, some plain green, others variously spotted and marked with shades of yellow. *Aucubas* do very well in light shade from Richmond, Va., southwards through the uplands, and also in California. They sometimes endure several winters at Washington, but no old plants could be found there a few years ago, and experienced cultivators, such as the late John Saul, afforded their plants protection. They can be studded among Ivies at the north, and may endure mild winters even at New York, but the precaution should be taken to keep a young stock from seed or cuttings.

Garrya has eight species in the Pacific States, Mexico and the West Indies. Some botanists give California alone six or eight species. They are mostly neat evergreens, with their flowers in



NYSSA SYLVATICA.

PARK AND CEMETERY.



SOME RECENTLY COMPLETED FRENCH MONUMENTS.

- | | | | |
|--------------------------------------|---------------------------------------|---|---|
| 1. MONUMENT TO PASTEUR.
AT MELUN. | 2. SOLDIERS' MONUMENT,
AT TOURNAY. | 3. MONUMENT TO LALANNE,
AT BORDEAUX. | 4. MONUMENT TO LAPOMMERAGE
AT PARIS. |
|--------------------------------------|---------------------------------------|---|---|

aments. *G. eliptica* endures the climate of Southern England very well. *G. Linheimeri* is said to be found in Central Texas, and would probably stand throughout the lower South.

Criselinia is in eight species from New Zealand, Chili and other portions of South America. Two or three of the New Zealand kinds are in European gardens, and may be adapted to parts of California.

Nyssa, "tupelo," is a genus of five or six species, North American, Himalayan and Malayan. Our botanies give at least five species as natives, some with six or eight names each, and even the best authorities get mixed with them. *N. sylvatica* is a beautiful tree when given room to develop, with three to eight fertile flowers in clusters, and neat dark green enduring foliage, which changes to a beautiful bronzy red in autumn. This species varies greatly in the woodlands, and old woodsmen assure me that "blackbirds" refuse the fruit of some forms. *N. aquatica* has its fertile flowers solitary, and is found further south. *N. capitata*, the "Ogeechee lime," is altogether a southern species. All the Nyssas should be cut well back and transplanted in a young state.

Trenton, N. J.

James MacPherson.

SOME RECENT FRENCH MONUMENTS.

The illustrations on the opposite page, showing some of the public monuments recently erected in France to its great men and to commemorate historical events, also points to the style of monument now more usually adopted. Sculptors and artists generally have for a long time declaimed against modern dress, as a barrier to harmonious achievements in their art, and many have been the devices resorted to to palliate this condition. It is certain that the habiliments of to-day do not conform to established concepts of artistic drapery, as every modern statue will declare, and so where the genius of the subject calls for no representation of physical characteristics, which is, of course, most frequently the case, the bust memorial meets all requirements. And as will be seen by the illustrations this class of monument readily admits of both decorative and descriptive detail. In fact it has come to pass that some of the most beautiful creations of the sculptor's art to-day are bust memorials.

The following is a brief description of the monuments illustrated:

Monument to Dr. Pasteur at Melun, France, by Houdin. It consists of a stela, surmounted by a bronze bust of the savant. A bas-relief represents a vaccinating scene, showing Pas-

teur and others assisting in the operation. A bronze shepherdess on the base is offering the doctor a token of homage and renown.

Monument erected at Tournay on the Belgian frontier in memory of French soldiers who fell at the siege of Anvers in 1832. It is the joint work of M. Constant Sonneville, architect, and M. Debert, a young French sculptor. The base is octagonal, about 34 feet in diameter, and is surmounted by a bronze frieze, reproducing in relief the principal episodes of the siege. Above this is a granite shaft, with crenelated capital, upon which stands a graceful figure of Belgium, who with a gesture of gratitude, and hand resting upon her breast, extends the laurel in the other toward France.

The monument to Maxime Lalanne, the etcher, at Bordeaux, by M. Pierre Granet, sculptor of that city, consists of a bust of Lalanne in white marble, set upon a pedestal of flesh colored marble of Languedoc. Around the stela, starting from near the ground, is entwined a branch of fusain in bronze. Seated astride this branch is the genius of Art, holding in one hand a twig of the tree and in the other a sheet of paper—that invented by Lalanne himself, and well-known to artists.

The monument to Lapommerage, literary and dramatic critic, one of the founders of the Polytechnic Association, is erected in Pere La Chaise, Paris. Under the stela, which supports a bronze bust of the subject, is a bronze plaque, attached to the base, showing him presiding at a meeting of the Polytechnic Association.

MEDITATION ON MONEYWORT.

I have been prompted to write this article, by a sincere desire to mitigate an evil, and in the hope to



MONEYWORT.

better the appearance of all the burial lots in Grove cemetery, New Brighton, Pa., and also of all other parts of the grounds.

Moneywort the plant of which I write is also known as "loosestrife," and is classed as an evergreen covering plant and trailer and recommended as well adapted for planting on wet ground or waterside. But I have never found any ground on which it will not grow, indeed it is the hardest plant to kill that I know of, horse-radish not excepted. It is also the easiest to propagate. The picture at the head of this article shows leaves, stem, and also roots; but it should be very distinctly understood that wherever the stem where the leaves join touches the ground and continues for but a short time in contact with it, it will throw out roots, grasp the earth and thus another plant is made; and so on without end. Such is also the case if a small piece of the plant is broken off, carried a short distance, dropped on the ground and left, and as the word trailer implies, it drags or draws along the ground all the time and is continually propagating itself in every direction. It is a pretty plant in the spring and summer; Peter Henderson calls it an "old favorite," and it bears a small yellow bell shaped flower; in June the leaves are of a nice green color, but in winter they turn to a dull dirty red.

It seems to want the earth and is determined to take possession.

However pleasant anything may be while we can have just as much or just as little as we please, it will become very disagreeable and unsatisfactory when forced upon us beyond what we desire and surely we have had and still have more than enough of this.

A weed is a plant where one does not want it.

So with us moneywort is a weed and a very pernicious one at that, and I would gladly welcome any advice, encouragement or assistance in making my attack upon it.

Our friend and brother superintendent, Bellett Lawson the elder, wrote to me about two years ago saying that he knew of a cemetery in Washington, D. C., where it had got such a hold, that its eradication was almost impossible. He advised me in making the attack to fork over the ground, and by hand remove all fibrous roots, depositing them on a wheelbarrow or ground cloth, then to take them to a hard bare spot where they could be burned when dry.

If any superintendent should be so fortunate as to have none of this weed let him see to it that no one shall ever have opportunity to introduce it into his grounds. The botanical name of this plant is *Lysimachia Nummularia*. If any member of the A. A. C. S., can give any information on this subject I would gladly welcome it.

*Hezekiah Hulme,
Sexton, Grove Cemetery, New Brighton, Pa.*

THOUGHTS ON CEMETERIES.

While the great majority of professional and business-men seldom give their thoughts to cemeteries and as a rule do not desire to even visit the last resting place of loved ones gone before, but prefer that whatever transactions necessity compels to be had with the monument dealer and cemetery man shall be delegated to either wife, daughter, mother or sister; we superintendents perhaps upon the same principle as they, do a great deal of thinking in our occupation because it is our "business." I once surprised one of the members of our Board of Trustees, when in reply to his question if a certain individual who was noted for his frequent visits to the cemetery, annoyed us or was meddlesome, I said yes, and hoped he would be elected a Trustee at an early day, as I believed he would then no longer make his appearance.

Retrospectively our thoughts are carried to the origin of cemeteries, we need not go back to the time when Abraham purchased the field of Machpelah as recorded in sacred history, to become assured that cemeteries were in existence for many centuries prior to the Christian era, but content ourselves with their formation in this country. In the order of construction "Mount Auburn" near Boston, comes first. It was consecrated in 1831. Afterward came "Laurel Hill," Philadelphia; "Greenwood," Brooklyn; "Spring Grove," Cincinnati and the Albany, N. Y. "Rural," the latter being incorporated in the year 1841, justly and without dispute, claims the richest natural beauties and endowments, and was the first to establish the system for the "Perpetual Care" of lots by an amendment to its charter in the year 1845, through the far-sighted energy and zeal of one of the trustees Mr. John I. Wendell. He conceived the plan from beholding the well kept lots of those who had bequeathed a legacy to a certain church corporation empowered to expend the interest thereon in caring for their respective lots in a near-by "Church-yard."

Here we find the beginning of cemetery corporations, and now there are but few cities, or even small towns and villages that do not boast of their "cities of the dead," suburban; yet in many instances under municipal control, as are public parks, while others are owned and governed by private or individual corporations similar to banking institutions, etc. To elevate the character of all cemeteries, and improve them upon the most modern and best accepted principles, was the aim and object of our esteemed, progressive and venerable "Father" Nichols, when in the year 1886 he originated and formed the "Association of American Cemetery Superintendents." Its widespread influence is now exerted not only in those cemeteries whose superintendents are members of it, but also extends to many if not all that have no representation, and whose managers are keeping abreast of the times by reading the "reports" of our annual-conventions, and as regular subscribers to, and readers of our official organ, the "PARK AND CEMETERY," a journal that no up-to-date and energetic person who is engaged in such work as its title implies can well afford to get along without, unless he be extremely sup-

ercilious or incapable of an advanced education. The already large and constantly increasing number of cemeteries leads us to enquire, are they established and being conducted upon right principles? The advocates of incineration or cremation of the human species, advance a very strong point in their arguments opposing interments, that too much valuable land is now occupied and devoted to cemetery purposes, thereby decreasing the assessed valuation of, and increasing the tax rate in the town where located. While this may be true to a certain extent in localities adjacent to such large cities as New York, like Newtown and Astoria on Long Island, it can hardly be wholly or justly so claimed, because the modern cemetery is always easily accessible even though far removed, and serves its part and uses as a public park which would if set apart to the storage or permanent keeping of urns or other receptacles of ashes, be required to contain an equal area to accommodate the erection of large monuments or memorials, so extravagantly indulged in, by not only the wealthy, but also the poorer classes and too frequently by the latter beyond their means. The development of large marble and granite quarries and the comparatively low cost of producing, working, transporting and erecting those materials by machinery, has had the effect to cause an increased demand for very large lots, not to accommodate burials, but improvements. In nearly all modern cemeteries the acreage of ornamental ground together with that occupied by roads, walks and borders exceeds by a large percentage that actually intended or used for interments. Years ago but a small piece of ground was reserved out of a large farm upon some commanding hill, as a "Burying-ground" for all future generations of a family, while in the "Church-yard" very small spaces were appropriated by large families within the narrow enclosure, because the burials were made very much in the same manner that single graves are seen in our large cemeteries, and which contains nearly as many graves as may be counted upon all the large plats outside of that part of the grounds.

If the location in a town of a cemetery, does affect the tax valuation and rate of taxes, it is generally not to a very large extent, as cemeteries are usually found to cover land of small value for even farm purposes; the more uneven the site the better adapted for natural and picturesque effects. Then too the very small decrease in tax valuation to the town is without dispute compensated by the benefits received by resident laborers, employed upon the grounds, and the support and patronage given many kinds of trade, and such enterprises as monumental works, florists and gardeners. Railroads are also greatly helped, not only in passenger but also in freight traffic.

No apprehension need be had that too much of the surface of Mother Earth shall, or will be taken up for burials into her bosom, but the most important subject relating to cemeteries is that of their future care. Those newly established have profited by the mistakes made by the older ones, in forming from the principal source of receipts a "permanent" fund for the maintenance of im-

provements, roads, buildings, etc., and a "perpetual care" fund for individual lots. No stronger argument can be produced in favor of these systems than can be seen in the neglected parts of those cemeteries whose managers have failed to observe the great necessity for both of these systems to preserve the sacred enclosures of the dead against the gnawing tooth of time. No dependence can be placed upon the willingness or ability of future generations to keep in good order and condition their cemeteries. The care should be placed where the responsibility belongs and no outside workmen ought to be allowed to enter and undertake to do that which is legitimately the right of those whose duty it is to protect the interests not only of the cemetery but each individual lot owner. There is no more reason that outsiders should care for lots, than there is in that they should be allowed to make interments. The custom originated in cemeteries organized without providing proper care systems and the privilege has in most cases resolved itself into license, difficult to overcome and eradicate.

The prediction is not an extravagant one that the time is not far distant when the creation of any more eyesores to communities will be prevented by a rigid law requiring all cemeteries to make ample provision for permanent care. Although such institutions as churches, hospitals, asylums, colleges, etc., may rely upon the faith and charity of future generations for support, yet the fears of those who have been interested in them have prompted the generous to contribute largely to endowment funds to insure future care.

The numerous failures of life, fire and other insurance companies that have attempted to transact business without having a sufficient "reserve fund," ought to serve as an example and lesson to every cemetery hoping to exist and maintain its present standing, after its grounds shall have been disposed of, without having on hand a well secured trust fund.

Great changes in the character of improvements have taken place within the past quarter of a century. The lawn plan which strictly harmonizes with and assists, but never forces nature, prevails. The great landscapist Adolph Strauch produced the most charming and delightful effects in the unbroken lawns and arboretums of his masterpiece—"Spring Grove" Cincinnati. From it was learned and taught the greatest beauty is attained in following out simplicity and durability in construction.

In forming rules and regulations, great care should be exercised in providing for the best interests of the lot-owners. And although to those unfamiliar with the requirements preventing abuses, they may appear arbitrary, they should esteem it a pleasure as well as a duty to yield a ready and cheerful compliance with them. They look to the management for protection against intruders, vandals and ghouls. In turn they should encourage and sustain every effort calculated to increase the standing and honor of the home of their deceased relatives and friends.

St. Agnes Cemetery, Albany, N. Y. B. D. Judson.

* PARK NOTES. *

Sellersville, Pa., has received a donation of one thousand dollars for the erection of a fountain and watering place.

* * *

The town of Pepperell, Mass., is about to take formal action on the acceptance of a bequest of the late Charles F. Lawrence of Brooklyn, N. Y., for a Public Library.

* * *

The Soldiers' Home at Grand Rapids, Mich., beautifully located on the Grand River, has been made a charming place. Besides its landscape features which include a lake, it has greenhouses, a zoological exhibit and a deer park, the latter a favorite addition. Ottawa County is to be congratulated.

* * *

In speaking of the demolition of the "Palisades" of the Hudson now in progress the *New York World* says: "Indian Head," the most notable landmark of the Palisades, was blown to bits recently in order that some speculators might sell its mutilated fragments for rubble-stone. What a shame it is that neither the New Jersey Legislature nor the Congress at Washington will lift a finger or spend a dollar to preserve the Palisades!" It rises to the level of a national disgrace. This sentiment will find an echo in every thinking mind.

* * *

The consummation of the magnificent Lake Front Park scheme of Chicago is likely to be delayed somewhat. The progressive and conservative elements in the Board of South Park Commissioners fought their quiet battle of ballots at their recent meeting, which resulted in the conservative element electing their president, John B. Sherman. This gentlemen has since said that the policy of the board would be to expend the money at its disposal where it would do the most good, but that nothing further would be done in the direction of improving the Lake Front park until some money was obtained with which to pursue the work.

* * *

Denver, Colo., through its South Side Improvement Society is making great efforts to arouse public interest in the approaching Arbor Day. It is proposed that residents of South Denver shall plant 10,000 trees in the coming holidays. In this connection the *Denver Times* says: In the breast of every man there is an inherent love of nature. This is shown by the rather anomalous fact that families around whose home not a tree or shrub or flower may be seen will spend whole days in our city parks and esteem the experience a rare treat. If public parks are enjoyable, why not make every home lot a private park, where every day may be experienced the joys of a holiday outing? It can be done at little money expense. Care and attention is the principal expenditure.

* * *

The second annual report of the Board of Commissioners of the Essex County, N. J., Department of Parks, dated January 1, 1898, gives the treasurers' account of the receipts and expenditures in connection with that system. In 1895 the legislature passed laws enabling the county to raise \$2,500,000. In the mean time from interest, rents and sale of old buildings and materials, the fund reached the sum of \$2,578,652.08. There has been expended for land and buildings \$1,924,050.36 and for construction \$167,705.42. Of the latter amount \$126,519.70 has been spent on Branch Brook Park, and \$29,886.25 on Eastside Park and smaller amounts have been used on other portions of the system and for materials and labor. The salaries have amounted to \$21,783.65; legal expenses \$26,029.73; landscape

architects, engineering, etc., \$64,958.35. Branch Brook Park, the principal park of the system, has cost \$1,255,606.27.

* * *

The educational committee of the Civic Club of Pittsburgh are working up a plan to make a program for Arbor Day for the public schools which will practically and theoretically secure the greatest and most lasting benefits from this annual occasion. The idea is to have regular programs arranged, to be carried out in the public schools on Arbor Day, in connection with the planting of young trees and shrubs on the school grounds and throughout the city. The plan as outlined will be the preparing of a program full of the spirit of the occasion, which the school directors will be asked to permit to be carried out by the different classes in the public schools in Pittsburgh and Allegheny. The program will consist of music, readings and short talks by interesting speakers, and will also include a program to be conducted in connection with the planting of the trees by the children themselves. Arbor Day in Pennsylvania usually occurs on or about April 15 and is appointed by the governor. A second day is appointed in September.

* * *

The 26th annual report of the Board of Park Commissioners of San Francisco, for the year ending June 30, 1897, shows a steadily increasing popularity in Golden Gate Park, and a continued effort on the part of the commissioners to improve and perfect it. A large amount of new work was carried out and the rehabilitation of the park after the Midwinter Fair almost completed. Considerable progress has been made on the Arboretum in the effort to make this instructive feature of park work as complete as possible. The Park Museum opened in 1895 has grown to be a grand feature and has required an enlargement of the building to accommodate the valuable collections purchased and donated to the park. It contains a valuable picture gallery and a magnificent display of Japanese ivory carvings the gift of Mr. John L. Bardwell. The receipts for park purposes from July 1, 1896 to July 1, 1897 were \$248,343.02 and the disbursements \$249,660.55, of which latter the construction account consumed \$124,607.60 and the maintenance \$111,875.00.

* * *

In an address before the Massachusetts Horticultural Society, on the "National Flower Movement," Mr. Frederick Leroy Sargent, president of the Columbine Association, related the progress of the movement and described the floral candidates already proposed with their various recommendations, and their number will soon be legion. The movement has grown rapidly with several branches, in which the Columbine Association occupies a leading place, its aim being "to bring about the final adoption of the Columbine as the National flower of the United States." Its appropriateness was stated as follows: The Columbine, (*Aquilegia*) "is graceful in poise, under no circumstances becoming a noxious weed, wearing an air of prosperity as it swings its tiny bells from the crevices of bare rocks. It wears our National colors—red, white and blue—and grows in every section of our country. The name Columbine is derived from the same Latin word as is the name of Columbus, the discoverer, and of Columbia, the name which our Nation rightly bears. That there are just 13 species of Columbine indigenous to the United States is interesting as a coincidence in view of the thirteen stripes in our flag. The time of flowering for the whole country extends through the spring and early summer, making it available on our only National holiday—the Fourth of July. They are at their very best on Memorial Day, when we have most need of a National flower. From the point of view of decorative design the Columbine possesses great advantages from the fact that its National associations are expressed not only in the name but in the form and colors assumed by the various parts."



CEMETERY NOTES.

In Russia, when coffins are covered with cloth, the color of the covering is, to a certain extent, distinctive, pink being used when the deceased is a child or a young person, crimson for women and brown for widows; but black is in no case employed.

* * *

The cemetery of Mcigs, Ga., about eight acres in extent, which was fenced in and finished some time last year, stands as a monument to the healthfulness of that town of about 600 inhabitants. There is not a grave in it.

* * *

A general law has been reported by the committee on the judiciary in the Massachusetts Assembly at Boston, authorizing cemetery corporations to incinerate bodies of the dead and to maintain buildings, etc., for that purpose.

* * *

The Evergreen Cemetery Association, New Haven, Conn., are making plans to raise \$20,000 by a new issue of bonds to take up some \$12,500 soon to fall due and to build a new cemetery chapel this year. Some \$7,500 is already on hand for this purpose, and the chapel is much needed.

* * *

Woodlawn cemetery association of Winona, Minn., is to receive \$10,000 as a bequest of George Plumer Smith, who died in Philadelphia recently, leaving a large estate. His remains were brought to Winona and laid beside those of his mother, who was the first person buried in Woodlawn cemetery. He left real estate in Winona valued at \$12,000 in trust, the proceeds to be used for the care of the graves of his mother and nephew.

* * *

Cemetery improvement on modern lines is rapidly transforming the older burial grounds. At the recent annual meeting of the Chester Rural cemetery, Chester, Pa., it was decided by the board to have all single graves in the strangers' section of the cemetery, that are not fenced in, leveled, and instead of the mounds, which are unsightly and require constant care, small headstones be placed in lieu thereof. Wilde Post No. 25, G. A. R., has also decided to have the graves in their soldiers' burial plot, thus treated.

* * *

The citizens of South Royalton, Vt., are considering a plan for caring for the old cemetery and establishing a new one. The following comment in connection with the movement is suggestive of cause and effect: "The condition of a schoolhouse or a cemetery has been alluded to as indicating the general character of a community. We have been conscious for some time that our own cemetery below the village did not do us justice in this respect. What we need is to have a properly organized association which will have full care and oversight of the cemetery, to acquire new burial ground when needed and to receive public, and private subscriptions or bequests for the care of lots, etc."

* * *

Mr. J. H. Wade, Jr., Cleveland, O., has presented to Lake View cemetery, a chapel and crypt in memory of his father, the late Mr. J. H. Wade. The design of Messrs. Hubbell and Benes, architects, has been accepted. The memorial chapel and crypt will be constructed of white marble, classic in style and the first of its kind in the country. It will be a T shaped structure. The chapel proper will be 33 by 63 feet and the crypt below 63 feet square. Within the chapel the burial services will be held, after which the casket will be lowered into the crypt below, where the remains will be placed temporarily. The chapel will have a stained glass window of rare value. The walls and floors will

be mosaic by Tiffany. The structure will be located between the two lakes in the cemetery, diagonally across from the present vault. It will be a costly edifice and perfect in all the details of its construction.

* * *

The Senate bill for the regulation of cemeteries and the disposal of dead bodies in the District of Columbia has become law. Under the new law, no cemetery shall be laid out within one and a half miles of the city of Washington; all cemeteries must be properly fenced and thoroughly drained, all cemeteries must be properly divided and platted; all graves for adults, persons above 10 years of age must be at least eight feet by three feet; graves for children six feet by 2 feet. A complete register of each cemetery must be kept at the office of its superintendent. The law also controls the disposal of dead bodies; requires properly attested permits for burial, removal or disinterment, and provides for the transfer of bodies, either within the district or to or from the outside. It regulates the keeping of bodies before burial, and in vaults; the reopening of graves and the depth of burial. It also regulates crematories and their use as well as the embalming of bodies. It is very comprehensive in detail.

* * *

The Fleischmann mausoleum, to be erected in the Spring Grove cemetery, Cincinnati, in memory of that city's philanthropic millionaire, will be a notable addition to monuments of that famous cemetery. It will be situated in the center of the 10,000 foot lot, in the foreground of the cemetery. The mausoleum will be a miniature reproduction of the temple of Athene Parthenos at Athens, built by Pericles about 438 B. C., and will be constructed of the very best light Barre granite. It will be 25 feet wide, nearly 37 feet long and 23 feet high. Over the bronze door-way, carved in the granite, will be the name "Fleischmann." The same massive blocks that form the roof and walls of the structure will, with highly polished surfaces, form the interior. The interior will consist of a 14 foot vestibule with three stained glass windows. At the further end of the vestibule will be 26 catacombs, each just large enough to receive a casket and with a door of Italian marble. These doors will be hermetically sealed when a casket is consigned to its compartment. The structure is to be completed December next.

Cemetery Reports.

The annual reports of the Fairmount Cemetery Association, Newark, N. J., presented at the annual meeting March 7, 1898, showed satisfactory results for the year's work. The total receipts amounted to \$40,174.37 which included, sales of lots \$23,114; single graves, \$6,423; opening graves, \$4,231.25; work on lots \$3,821.83. The disbursements amounted to \$26,242.17, of which labor and salaries consumed \$20,648.39. The report of the superintendent shows considerable general improvement. Four new sections were laid out and completed on the lawn plan, and three new plots for single graves, and the single grave sections have all been put in good condition. There were sold 97 lots and 466 single graves. 1174 single graves were sodded. 697 lots were cared for by order of lot owners. There are now 2,225 lots under perpetual care. Fifty four granite monuments and 40 headstones were erected, and 15 iron railings and 25 hedge fences were removed. There were 1,023 interments for the year. The average number of men employed per month was 31.

* * *

The annual reports of the Lowell Cemetery Association, Lowell, Mass., showed a better financial condition than for some time past. Comparatively little improvement except what was absolutely necessary to be done has been carried out during the year. The sale of lots was double that of 1896, and amounted to \$5,887.97. The total receipts for the year were \$23,705, and the expenditures for labor were, \$8,213.93. An amount of \$1,500

PARK AND CEMETERY.

was paid off the old debt. The perpetual care fund is now \$79,124.65, an increase of \$4,340, and the reserve fund \$15,730.76. In speaking of perpetual care President Chas. A. Stoll said: "I confess that I never was so much impressed with the importance of perpetual care as I have been since called to the presidency. In my rambles about the grounds with the superintendent I have come across lot after lot that needed care and in many cases the superintendent has informed me that there was no one known to him to care for the lot." In this same connection Mr. Charles L. Knapp, Treasurer said: "While yet in a position to speak officially I wish to again point to the fact that there are many trust funds now deposited with the corporation which are inadequate to provide for the care of the lots in future years. It must be plain to see that the \$100 trust fund which earns at present \$4.00 per annum, barely meets the \$4.00 yearly charge for the care of lots, and leaves no margin of safety for accidents. Further, it is an undoubted certainty that in the future, and before long, too, the savings banks will pay a less rate than is paid to-day. The situation has been referred to by me before and it is so important that as I have said, I take this occasion to once more lay facts before lot-owners. I say unreservedly, that my experience in cemetery work convinces me that \$100 is insufficient in amount to provide for the future care of a 300 square foot lot."

CORRESPONDENCE.

Editor Park and Cemetery,

DEAR SIR:—PARK AND CEMETERY is always a welcome visitor, and you may rest assured that the space given to Cascade Park in the December issue is greatly appreciated, especially by the projectors, who are delighted with the fine cuts so faithfully illustrating the beauties of the place. Many people from far and near visited the park the past season, and the influence of the work there is being felt in other places; your correspondent has since been to Meadville with a view to developing a park there for like purposes. Arrangements are being made to begin work there at an early date on the buildings, so that the people may have all the benefit possible this season; later the writer will give your readers a detailed description. Other places of like character are under consideration, and it is really astonishing the number of parks that are projected from all quarters, from which we may infer we are only in the infancy of park work.

It seems to me that PARK AND CEMETERY for January is a little ahead of some of the previous issues. The writer is glad to see the excellent and, it may be added, practical series of articles from Mr. Simonds, for he knows whereof he speaks. J. MacP. talks well every time, and profitably. Fanny Copley Seavey's notes are always interesting, because one can see the places she so vividly describes without going there. Joseph Meehan, a thorough botanist and horticulturist, and with it the finished gentleman, must delight all with his excellent articles. With the varied matter from other pens, together with the Cemetery and Park Notes, surely no other journal gives as much practical information for the small fee of one dollar for twelve numbers as PARK AND CEMETERY. The writer read with regret your brief notice of the discontinuance of *Garden and Forest*; he has every number, and has had occasion to refer to them very often; they are helpful in every particular, and Prof. Sargent should be accorded the credit due to him for maintaining it so long at such a high standard of scientific accuracy and at personal cost; these sentiments are borne out by a very excellent article which appeared quite recently in the *New York Critic*.

But what do you think of the movement by the authorities of Mount Auburn Cemetery? Who would have thought that the

trustees of that most noted, but conservative, cemetery would have petitioned the legislature to build a crematory? Truly the "world do move," and the people also; what will those say now who do not believe in incineration of the dead? It has evidently come to stay, and why not give it a graceful recognition?

The writer will not venture his thoughts on what the modern cemetery may be and the reform that it is capable of bringing about, but may at some future time venture to place them for consideration in these columns, unless Mr. Salway, Mr. Eurich, Mr. Lawson, or the gentleman from Rhode Island, who was conspicuous by his absence at the Cincinnati convention, will give us the desired light, and spare the pen of an *Observer*.

"PARK AND CEMETERY."

As this issue of PARK AND CEMETERY will be read by several thousand nonsubscribers we are prompted to call attention more directly to its object. Meditation on the future in relation to what effect on the condition of our country, the present progressive movement in art out-of-doors will have, naturally calls attention to the work PARK AND CEMETERY has aided in accomplishing, in the past as well as to that ahead. Specially devoted to certain interests as this journal was, under the title of *The Modern Cemetery*, it has taken up during its career all the many branches of cemetery work, which have resulted in the park-like burial grounds of to-day, an improvement over the wretched conditions of the past, of which there is still unfortunately ample evidence to testify to the remarkable change. Its field comprised not only the details of burial practices as related to the cemetery, but art in landscape work and art in memorials, and it has kept in the van always in the advocacy of the highest ideals and in gathering the knowledge for the practical work in the effort to reach such ideals. In the broader field under the title of PARK AND CEMETERY, the journal has really only extended its operations, for the same rules applying to landscape art in the modern cemetery, apply with equal force to the park, the public recreation ground, the school yard or the homestead. The difference is only in detail, after all. The materials to deal with in landscape art for both departments are the same. The crying need over the major part of this great country to-day is more natural beauty about our cities and homes, and the scope of PARK AND CEMETERY covers the field in all particulars. Its efforts in the future will be to both aid and encourage by information, practical illustration and descriptive matter, the love of nature for her own sake, and the love and knowledge of the materials she offers to enable one to intelligently choose of that material and to adapt it. To this end PARK AND CEMETERY earnestly invites the co-operation of all who desire to promote art out-of-doors in its general application as suggested above.

Association of American Cemetery Superintendents.

G. W. CREEZY, "Harmony Grove," Salem, Mass., President.
ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., Vice President.
F. EURICH, Woodward Lawn, Detroit, Mich., Secretary and Treasurer.

The Twelfth Annual Convention will be held the coming fall at Omaha, Neb.

The Park and Out-Door Art Association.

JOHN B. CASTLEMAN, Louisville, Ky., President,
L. E. HOLDEN, Cleveland, O., Vice-President.
WARREN H. MANNING, Tremont Building, Boston, Mass., Secy. and Treas.

The next meeting of the Association will be held at Minneapolis, Minn., June 23, 1898.

Publishers' Department

Park Commissioners and Cemetery trustees are requested to send us copies of their reports.

A communication has been received from the Park Commissioners of Paterson, N. J., emphatically denying that political considerations had anything whatever to do with the resignation of Mr. Otto Buckeck, their late Park Superintendent. The overcrowded condition of our columns prevent fuller attention to the matter in this issue.

The annual report of the Tree Planting and Fountain Society of Brooklyn, N. Y., for 1897 makes a volume of some 140 pages. The work the society has accomplished, and the good results that are in progress, demand our warmest endorsement, and we most urgently advise a study of its methods and objects by all who realize the importance of such influences with a view to practical application where needed.

Mr. T. Herbert Letson succeeds Mr. John Franklin as cemetery superintendent of the town of Hudson, N. Y.

Mr. J. B. Erion of Omaha, Neb., who some time since was appointed a superintendent of National cemeteries, has been assigned to Mound City, Ill.

A meeting of the stockholders of Union cemetery, Dickson, Tenn., resulted in the election of a board of women directors. This practically throws the management of this cemetery into the hands of the Ladies' Cemetery Association.

REPORTS, ETC., RECEIVED.

From Henry F. Johnson, Eighth Annual Report of the Cemetery Commissioners of Wildwood cemetery, Winchester, Mass., to Dec. 31, 1897.

Essex County, New Jersey Department of Parks. Second Annual Report of the Board of Commissioners, 1897. This most complete report, lavishly illustrated and with numerous maps, gives one a very broad acquaintance with the inception and progress of this wisely ordered plan

of a comprehensive and adequate county park system. It must ever remain a monument of the sagacity and far-sightedness of those intelligent citizens, among whom and taking a very active part in its promotion, was Mr. Fred W. Kelsey, the New York nurseryman, whose enthusiastic love of nature and extensive business knowledge with that of his colleagues, successfully advocated their ideas, grafting them upon the intelligence of their fellow citizens with the results well accomplished. In an early issue we shall give some illustrations and details of this system.

Annual Report of the Commissioners of the North Burial Ground, Providence, R. I., for the year 1897. Illustrated.

Death to Dandelions.

A few drops of gasoline applied to the crown of the plant will effectually destroy it without injury to the lawn. Wm. F. Jenson, Supt., Glenwood cemetery, Mankato, Minn.

On the question of ornamenting home grounds, the Maine Agricultural Experiment Station, Orono, has issued Bulletin No. 42. A constantly recurring problem in New England is, How shall we keep the boys on the farm? The answer is not easy, but doubtless more people are driven from the farm by its isolation, loneliness and lack of tasteful surroundings than by any other single cause. If the boys and girls go away to the academy for a time and get a taste of village or city life, the contrast when they return to the old farm is often too strong. No class of people has better opportunities for making the home pleasant and attractive than the farmer. In this bulletin Professor Munson has given concise directions for improving the surroundings of the home. It includes a description of the location of a house, the making and care of lawns, suggestions as to what, where and how to plant, and a list of the more valuable ornamental trees and shrubs found in Maine. It will be sent to all who apply to the Agricultural Experiment Station, Orono, Me. In writing please mention this paper.

Rosenberger's Law Monthly for February, published at Chicago, contains information on how to get a copyright and on the study of Law at home. It is replete with useful legal matter of every day service to everybody.

CATALOGUES.

Trade Catalogues Received. R. Douglas & Sons, Waukegan, Ill., hardy and rare evergreen and shade trees.—Thomas Meehan & Sons, Germantown, Philadelphia.—D. Hill, Dundee, Ill., the Dundee Nurseries, Evergreens, Ornamentals, etc.—Mrs. Theodosia Shepherd, Ventura, Calif., Seeds and Novelties from the Pacific Coast.—J. C. Vaughan, Chicago, Shrubs, Seeds, Fertilizers, Tools, etc.—Samuel C. Moon, The Morrisville Nurseries, Morrisville, Pa., Ornamental Trees, Shrubs, Plants, etc.—Wm. H. Harrison & Sons, Wyomanock Nurseries, Lebanon Springs, N. Y., Trees, Hardy Shrubs, etc.—List of Plants offered by Pinehurst Nurseries, Pinehurst, N. C. Spring of 1898.—Watkins General Retail Catalogue of Seeds, Trees and Plants. S. L. Watkins, Grizzly Flats, California.

Points For Cemetery Officials.

Has your cemetery a perpetual care fund? If not, and you care for the future of your cemetery start one now. An interesting article on this subject with forms, etc., will appear in PARK AND CEMETERY for April.

* * *

Have you adopted the lawn plan in your cemetery? It is adapted to small as well as large cemeteries. Continuous lawns are not only more pleasing to the eye than the old plan of isolated lots, but are more easily cared for hence less expensive. A plan of a five acre cemetery laid out on the lawn plan will be illustrated in PARK AND CEMETERY for April. Additions to old cemeteries should be made on the lawn plan.

* * *

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* * *

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* * *

Enthusiasm is as essential in the work of the cemetery as in that of anything else where success is sought. One way to create interest in your local cemetery is to keep before your trustees, directors or other officers what is being done by other cemeteries. This is accomplished by appropriating a small sum for extra copies of PARK AND CEMETERY. Special rates are made on three or more copies. A number of cemeteries make such an appropriation every year. If your cemetery has no fund, let ten or a dozen lot owners create one. Try it this year.

* * *

Send the publisher of PARK AND CEMETERY the names and addresses of persons who would be interested in becoming subscribers. Sample copies will be sent them without charge.

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Readers of PARK AND CEMETERY who are contemplating the purchase of iron fencing or entrances for cemeteries, parks or private grounds will find it to their interest to confer with the Barbee Wire and Works of Chicago and LaFayette, Ind. Years of experience in furnishing work of this nature has resulted in the adoption of a most complete and satisfactory method of placing before intending buyers, information in such a form as to show clearly the various styles and sizes of their fencing, the methods of construction and other important details. This is accomplished by means of scale drawings, which not only make it possible to buy intelligently but saves much unnecessary correspondence. In addition to their extensive fence business, the Barbee Wire and Iron Works manufactures a complete line of iron and wire goods for use in parks and cemeteries, and carry in stock ready for shipment one of the largest lines of vases in the country. Their catalogue which will be sent on application illustrates fences, arches, chairs, settees, vases, fountains, lawn and grave border guards, hitching posts, tree guards, lawn rollers, lawn mowers, summer houses, etc.

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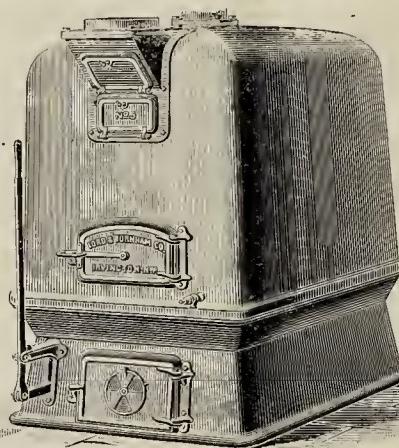
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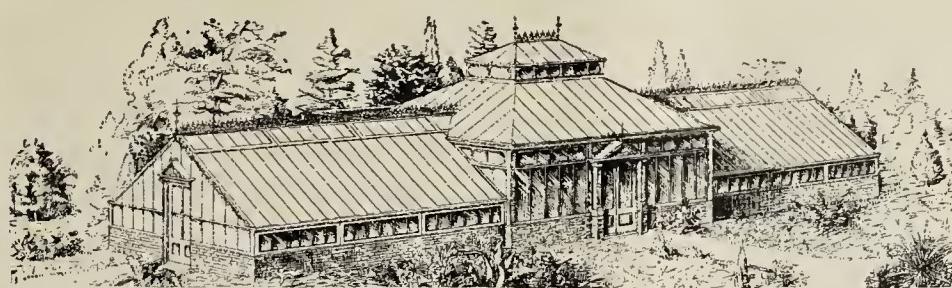
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The suit brought by Anton Rusham to recover damages in the sum of \$20 oco from Archbishop Elder and the trustees of Calvary cemetery, Cincinnati, O., growing out of the disinterment and reburial of the remains of his relatives ended in a verdict for \$1 and costs in favor of the plaintiff. Rusham based his claim largely on the mental anguish and injury to his feelings because of the commingling in one grave in the reburial and thus destroying the identity of the remains. The Court held that a person cannot recover damages for mental pain and anguish unless the person sustains a pecuniary loss, involving injury to his person, property, health or reputation.

* * *

A strange item in the Bishop Burton Church, England, accounts for last year is: "To killing worms in the bust of John Wesley, 15 shillings."



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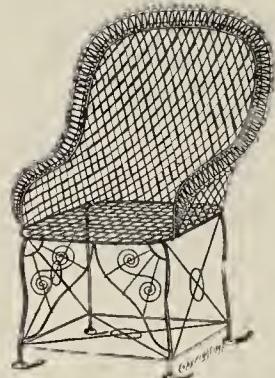
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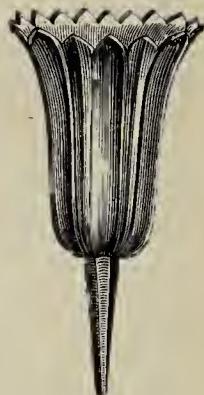
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CONTENTS.

EDITORIAL—ARBOR DAY—APATHY OF CEMETERY OFFICIALS—

THE PRESS AS A POWER IN CITY EMBELLISHMENT.....	23
TREE PLANTING—ITS NECESSITY AND BENEFITS.....	24
*RESIDENCE STREETS, VIII.....	25
*WATER LILIES—WHEN AND HOW TO GROW THEM.....	27
*THE SUNKEN FLOWER BED AND ORIENTAL PLANES, FAIRMOUNT PARK, PHILADELPHIA	28
*DESIGN FOR THE LAYING OUT OF A SMALL CEMETERY	29
THE CARE OF LAWNS.....	30
PERPETUAL CARE OF CEMETERIES.....	31
*THE NEW NURSERIES OF THE CITY OF PARIS.....	32
ARBOR DAY EXERCISES, HERE AND THERE	33
*GARDEN PLANTS—THEIR GEOGRAPHY, XXVIII.....	35
PARK NOTES.....	36
CEMETERY NOTES—REPORTS	37
CONTRIBUTED CRITICISM.....	37
TREES FOR NARROW BORDERS	38
PUBLISHER'S DEPARTMENT.....	38
CORRESPONDENCE.....	39

*Illustrated.

THE matter of greatest interest for the month is "Arbor Day," for which a number of the states, by their governors, issue proclamations respecting its import, and enjoining observance. From many points of view, there is no more important movement in the country than that of imparting a true understanding of the value of tree culture, both on economic and ethical grounds. And Arbor Day, as now suggested, includes more than the mere planting of trees; the exercises connected therewith, and which are becoming yearly more diffused, include educational features, which while partaking of physical pleasure, include very much that is bound to be uplifting and stimulating, and in the direct line of culture of the people. Moreover, the main effort is directed to the young, in whose minds the knowledge of the great truths of nature must react to the welfare of their own and all future generations. It takes the universe to

grow a tree. Let us all encourage the movement as one of the most beneficent of modern ideas, full of great promise.

IT is unfortunate that the progressive movement so manifest in the management of many of our larger cemeteries should be so comparatively sluggish in the majority of cases. We hear so constantly from superintendents of the difficulty they have in securing the active co operation of their governing officials. It is to be feared, with all due deference to the aforesaid officials, that the indifference is due to apathy, and this apathy to lack of education or knowledge of the means of progress, and the progress itself as exhibited elsewhere. Knowledge cannot be attained without effort, and it cannot be obtained without material in the way of literature from which to glean it. Cemetery officials, with any business tact, can not but see that it is to their interest to not only secure the current literature devoted to the development of their properties, but should exercise their power and intelligence to the end that their superintendent and other active workers should have every opportunity to keep up with the times, and they should appropriate the means to subscribe for the literature to secure that desideratum.

M R. CHARLES DE KAY, the well-known art critic of New York, has in a recent issue of *Harper's Weekly* pointedly drawn attention to some of the weak points in our efforts at city art embellishment. He further made an excellent suggestion that the press of the country take the matter up seriously, and work harmoniously to the end of securing funds as an endowment, upon which art leagues, and other active principles in city adornment, might devote their entire energies to the work upon which they were founded, relieved of the financial features, which have always been a stumbling block. The press has worked such wonders in civilizing the world and enriching it, that it would seem but another channel into which it might divert a share of its force to a good end. We need a sustained energy in the direction of building up our native art talent, and our art culture generally, and there is no such constant force upon which we can draw for stimulus as the press.

TREE PLANTING.—ITS NECESSITY AND BENEFITS.

It is very gratifying to note the rapid development of the sentiment resulting in the planting of trees, whether for use or beauty or both. And both use and beauty are involved to a remarkable degree in the practical application of the sentiment. The fact that communities, generally, have readily followed the lead of the advocates of tree planting, suggests that the education imparted by such advocates presents the necessity of the work in a forcible manner, as a means to health, comfort, pleasure and an improved condition of streets and avenues unattainable in any other way. In the larger sense of converting waste places into useful woodland, or to replace the unrestricted devastation of the lumberman, the question of necessity to the sensible citizen needs no argument.

As Mr. S. Gordon Cumming, in a speech at Hampton, Va., on Arbor Day, Nov. 26, 1897, said: "The influence of trees upon climate and rainfall gives to their planting and to their protection where nature has already planted them, a national importance. Our wicked wastefulness and contempt for the teaching of science in this matter will most surely be avenged on our descendants. Nature may not instantly rebuke, but she never forgives the breach of her laws. No instructed agriculturist is unacquainted with the ameliorating influence on climate, rainfall, freshet, windstorms, etc., produced by the liberal planting of trees on waste lands; the cheering thing has been that the same wise ideas have crept into the minds of our people and made them set resolutely to work in carrying out the simple, practical, and benignant suggestion of Mr. Morton in Arbor Day observance."

In regard to tree planting in our cities and towns, the Philadelphia *Enquirer* in an article warmly approving of the work of the Tree Planting and Fountain Society of Brooklyn, commends it as educating the people to an understanding of the value and beauty of shade trees in towns and cities. "It is to be regretted that men and women in large cities do not take more individual interest in tree-planting. There is a short stretch of road on South Broad street, Philadelphia, which is lined with trees that were placed there only a few years ago through the exertions of one man, and already their shade is restful in summer, and they give added beauty to a noble thoroughfare. In caring for these things we might well imitate the dwellers in many cities of the old world which are familiar to transatlantic tourists. It was a wise remark that Sir Walter Scott put into the mouth of one of his characters: 'When you're doin' naethin' else, aye be stickin' in a tree; it will grow whilst ye are sleepin'.'

There are but few cities in the country that would not be benefited by the active operation of a Tree Planting Association. It is not only in the planting of new trees, that such an association is valuable; that is the least feature of its usefulness. It is in preserving and intelligently caring for the trees already mature and serving nature's wise purposes, that the importance of the work is appreciated. It is an intelligence of no common order that can successfully imbibe and impart all the knowledge necessary to the care and culture of trees to ensure their best appearance, and health and vigor of growth. But let the work be appreciated, and confidence secured in the work of an association for the purpose, and it is astonishing how quickly the community realizes the advantages secured, and lends its assistance to encourage the greatest usefulness of the society.

On the subject of trees, the Hon. O. B. Hadwen, of Worcester, Mass., at a recent farmer's meeting at Boston, said: The planting of trees is a subject that requires deep study, and that nowhere is there a better teacher than nature. For it is only by close alliance with nature that man can hope to beautify his parks or grounds.

The last annual report of the Brooklyn Society, before referred to, contains a fund of information and suggestion on the subject of street trees truly surprising in scope and practicability. Of its past the report says: "The trees that have been planted will bear witness to future generations of the wisdom or lack of wisdom in their selection. Those that have been pruned likewise will testify continually of the judgment displayed in the pruning." But the wisdom brought to bear in the conduct of the society's missionary efforts, is already amply justified in the increasing attention given to the subject all over the country, besides the efficacy of its practical work in Brooklyn itself, where it is in positive evidence.

Lord Kelvin has recently contributed an important emphasis to the value of trees in their relation to the welfare of higher animal life, a question which will be more readily appreciated as it is better comprehended. Trees do a great work in maintaining the air in a fit condition for our use. Nothing takes the place of the tree in its power of laying hold of the carbonic acid gas, constantly being cast into the air, and separating the carbon and oxygen, absorbing the former for its own use and giving off the latter that it may again serve its useful end in support of life. "In a fine shade tree we have on the surface both beauty and utility, and then this tree is part of a deeper utility that is about as vital as the air we breathe."

RESIDENCE STREETS.—VIII.

PLANTING.—*Continued.*

THE PARKWAYS.

If it is granted that a decided improvement might be made in the planting of our streets by the

very likely they would have to be taken out in order to put down the sidewalk. The owner could not be reached before the trees were destroyed, and the wood-chopper obtained a cord of wood. In a neighboring suburb, an old street was to be improved(?). Near the sidewalk stood a beautiful burr oak, perhaps 18 inches in diameter by the side of which grew a thorn apple tree, about six inches in diameter. Both trees were so perfect, and the combination was so good, that it was a pleasure to stop and look at them. There were other native trees nearby that had been growing with vigor for at least 50 years. They stood between the sidewalk and roadway in just such positions as would make them most attractive to a painter, but unfortunately they were at various distances from edge of the park-way, and so did



FIG. II.—SASSAFRAS AND BEECH TREES THAT DESERVE TO BE MORE FREQUENTLY USED IN STREET PLANTING.

use of a greater variety of trees, and the planting of shrubs and herbaceous plants, all arranged in groups planned to produce the most picturesque effects, the next question that arises is: how can the desired changes be brought about? A more general appreciation of natural beauty will be of great help, but the actual planting and carrying out of the planting must be done by a few persons who have had training and education that will fit them for the work, and who have, moreover, a love for "art out of doors." That people often fail to realize the attractiveness of a tree, or of a group of trees, is shown by sad mistakes that are continually being made. A new street was made some time ago not far from my home. The natural surface of the ground, where some good thrifty young oaks were growing, was not to be changed in grading. Some of these trees would have added more to the attractiveness of the street border than two hundred dollars worth of planting after the grading and other improvements were completed. One day I discovered a laborer cutting these trees down, and protested against the destruction going on. He replied that: the owner had told him that he could have all the trees growing in the proposed highway. They were nothing but scrub oaks, anyway, and

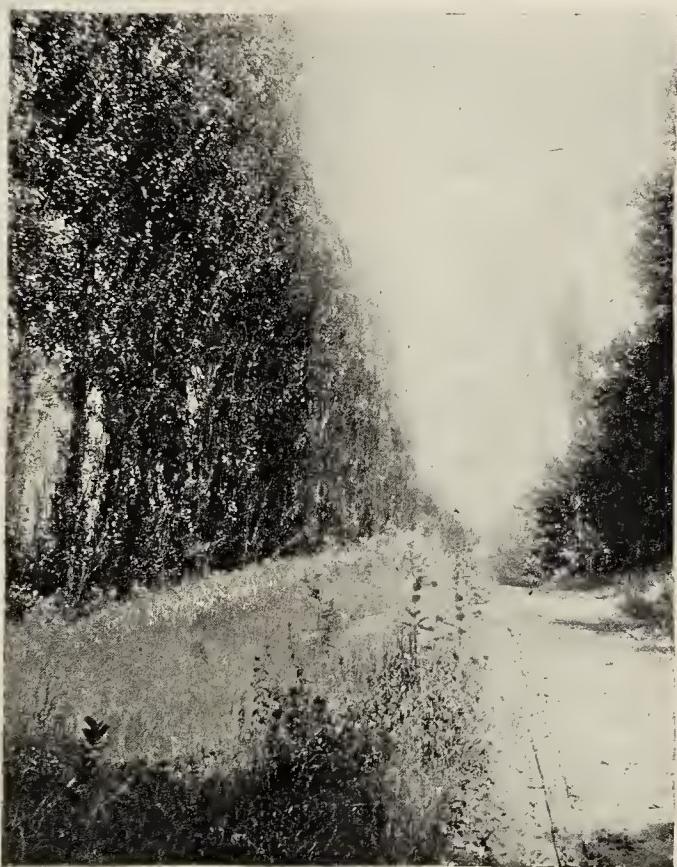


FIG. 12.—LOMBARDY POPLARS, TO MAKE ROOM FOR WHICH SUCH TREES WERE CUT DOWN AS ARE SHOWN IN FIG. II.

not please the eye of the commissioners, for whom the line of beauty seemed to be straight instead of curved. A later visit to this suburb showed that these trees had been cut down and their places taken by a straight row of two-inch elms. Along a country road there grew naturally fine specimens of sugar maples, beeches, oaks, lindens, sassafras and other trees. The owner of an adjoining farm wished to improve the roadside, and so cut down these naturally beautiful long-lived trees and planted in their places the short-lived and not always beautiful Lombardy poplars. In a city which I have known for many years, and which is always spoken of as a beautiful place, there was one street which, on account of its undulations and its passing many large residence grounds, was considered especially attractive. The grades were not steep, probably nowhere rising more than six feet in one hundred. On visiting the city last year, I found this highway in the condition shown in the figure at the bottom of page 205 of volume VII. The residents had protested against the change in grade, but the Board of Public Works was obstinate. In another western city there were a number of exceptionally fine burr oaks and hickory trees, in positions varying from about three to five feet from the lot line, on one of the residence streets. The street was very broad, so that the space each side of the roadway was at least twenty-five feet wide. For practical use and convenience the sidewalk might have been anywhere from one to ten feet from the lot line, but the City Council had passed an ordinance that the sidewalk should be placed at a uniform distance of four feet, so the City Engineer said that these trees would "have to go."

Such instances might be given indefinitely. They show the need of education; of calling peoples' attention to good examples of roadside plantations, and of realizing the real importance of our subject. Village improvement societies ought to accomplish much good in this direction by studying natural effects, by getting the best suggestions available, by seeing the best examples, and then doing planting that will make people enthusiastic over the beautiful result.

O. C. Simonds.

WATER-LILIES—WHEN AND HOW TO GROW THEM.

Aside from natural water there are three receptacles mainly used for the growing of water lilies—namely, *tubs, tanks and ponds*.

TUBS are less used than tanks or ponds coming in as an invaluable makeshift to those lacking better facilities. Ordinary half-barrel tubs are the most numerous, though tierces, vats, hogsheads, etc., are often sawn down and used. The tub is filled to within 8 or 12 inches of the top with soil, the lilies

planted the tub placed in full sunshine and kept full of water. They should be wintered in the cellar.

Cement basins or TANKS, either under glass or in open air, are most satisfactory places to grow all kinds of water plants. The size and shape of the tank are points to be adjusted by the owner and the purpose for which it is intended. Circles, ellipses and parallelograms are mostly used. We prefer the latter; irregular and naturalistic character may be given in the planting. 6 by 12 ft. or 12 by 20 ft. and 2½ ft. deep are convenient dimensions for small tanks. 20 by 50 ft. and 3½ ft. deep in the middle is a good size for the larger nymphaeas. Victorias should have at least 700 sq. ft. of water surface. The tank should be given a sunny location. In the absence of water works, water to replenish with during the summer will have to be provided for from a spring, well, lead troughs from the roof of some building, or otherwise. Two barrels of water per week will supply a 12 by 20 ft. tank during a scarce time.

The most economical tank is made by digging into the ground. Soil from the excavation may be thrown around the margins sufficient to make a neat embankment if desired. Before the masonry is begun a supply, an overflow and a drain pipe should be put in place, and if the tank is to be artificially heated, connections for the flow and return pipes should be put through the walls in course of construction. The walls should be of brick or stone laid in cement and the soil well packed around the outsides. In cold climates they should be 13 inches thick; in the latitude of southern Kentucky 8 inches, further south 4 inches thick will suffice. For the bottom beat the soil down firm and cover to the depth of four inches with coarse gravel or broken up brick or stone; on this pour thin mortar made of one part sand and two parts cement, seeing that the gravel is coarse enough and the mortar thin enough to run freely to the bottom everywhere. Then finish both bottom and sides with a good coat of Portland cement. In latitudes where there is no danger of hard freezing or in greenhouses, a good coat of cement plastered to the soil will be sufficient without a wall. Care should be taken in this case to pack the soil solidly together as there is danger of the plaster bursting from the heavy pressure of the water. Lilies should not be planted in the tank for a few days while the water is strong of cement.

The construction of PONDS is less intricate. If the water supply is to be from the surrounding hillsides, from springs or streams, the lowest part of the ground is generally the most suitable place. If the pond is to be made by building a dam across a stream, due preparation should be taken against freshets by making the basin on one side of the

stream in order that the current may not wash *pell-mell* through the lily plantation. The water line or edge of the pond should be determined by a spirit level or otherwise and the soil removed to the depth required, either by an ordinary pond scraper or with pick, shovel and cart. If desired for water plants wholly—three and one-half feet is deep enough, but for large ponds it is recommended that considerable depth be attained and only the shallower places be used for lilies. Where the soil is porous or gravelly and the water supply scant the whole basin should be plastered with a three or four inch coat of stiff clay mud, but where the soil is of a clayey firm, texture, a good pounding with mauls, or allowing stock to tramp the place for a season will

The other tropical lilies submit with reluctance to limited quarters and should be given plenty of room.

In a water lily tank in open air in Kentucky, without artificial heat all the tropical water lilies including the Victorias may be planted out after June 1st and bloomed with success; strong healthy plants and plenty of food being the chief requisites. All kinds of hardy lilies may be grown in tanks.

In natural ponds with proper depth and mud bottoms that are not supplied by cold springs and that are not too much shaded, all the hardy water lilies will thrive and live over winter anywhere in the U. S., or Southern Canada without protection. All the tropical lilies can be flowered successfully in open ponds.

No water lilies do well in swift streams but slow streams and coves may be planted with satisfactory results. In swamps or sloughs where the soil is barely covered with water the Lotuses may be grown fairly well.

The SOIL for growing aquatics is of the simplest kinds. They are strong feeders. Heavy loam from the garden made rich by well decayed manure is an ideal artificial soil. If commercial fertilizers or fresh manure are used, in decomposing they give a stench to the water and cause it to stagnate.

For PLANTING the soil may be placed either in boxes or spread entirely over the bottom of the tank or pond to the depth of 10 inches. Planting in boxes is preferred in ponds where the water is liable to rise and fall during the summer in order that

the young plants may be kept at congenial depths until established. Discretion should be used in planting the small varieties in shallow water and the strong sorts in deeper places. Care should be taken never to bruise a water lily root—especially a lotus as it often proves fatal. In planting, dig a trench with the hands in the soil and lay the root in horizontally—not set up endwise—and cover to a depth twice the thickness of the root. If there are fish in the water, poultry netting, slabs or something more available should be placed around the roots for protection.

The month of May is the best season of the year to plant, though any time from March to July is favorable. Tropical lilies should not be put into open air till the water is warm and all danger of frost is over. Being judiciously selected and planted in congenial quarters, water lilies need no further cultivation and are sure to succeed with anyone.

Geo. B. Moulder.



LILY POND, WASHINGTON PARK, CHICAGO.

make the bottom almost as retentive as if cemented.

Doubtless there is a greater number of failures in water lily culture arising from an undue knowledge in THE SELECTION OF VARIETIES than from any other source. If tubs are to be planted, select plants adapted to tub-culture—the same with tanks, ponds, or natural water, and do not expect plants from Sweden to flourish with those from Brazil.

In tubs, of the hardy water lilies, any of the *Nymphæa pygmæa*, *N. Laydekeri* or *N. Odorata* families may be grown well. The Marliaceas are rather large. *Nelumbiums* make fine tub plants—especially *N. Speciosum* and *N. album grandiflorum* because they have been under rigid cultivation in the Orient for centuries. Of the tender varieties *N. Mexicana*, *N. Flava* and *N. Gracilis* are the best. The Zanzibar varieties, *N. Dentata*, *N. Scutifolia*, and *N. Devonensis* may be “dwarfed” in tubs where they do splendidly but cannot be brought to themselves in water of less than 10 ft. in diameter.

THE SUNKEN FLOWER-BED AND ORIENTAL PLANES,
FAIRMOUNT PARK, PHILADELPHIA.

The beauty of the Sunken Flower-Bed near Horticultural Hall is so much spoken of, that many have heard of it who have never seen it, and it is therefore, with very much pleasure I am able to furnish a photograph of it, through the courtesy of the superintendent, Mr. Charles H. Miller.

This garden was laid out for the Centennial, in 1876, and so popular has it been always that it remains to-day, practically, in the same shape that it was at that time.

Horticultural Hall is its background on the east,



SUNKEN GARDEN, FAIRMOUNT PARK, PHILADELPHIA.

and from a balcony around the building, at a good height from the ground, a splendid view of the long stretch of beds of various colors is to be had. At the far end of the length of beds will be seen a cluster of statuary. This is known as the Catholic Fountain, it having been erected at the period of the Centennial by the Catholic Total Abstinence Societies of America.

As a guide to those who may wish to create a similar set of beds, I will give the contents of the first set, consisting of five beds, the list having been kindly furnished me by Mr. Thomas Mingeay, who has charge of the plants at the hall.

In the first bed is variegated abutilon, edged with Acalypha musaica. The second, contains scarlet geranium, edged with variegated geranium Madam Salleroi. The third is the same as the first, excepting that the position of the plants is reversed,

the Acalypha being in the centre and the variegated abutilon for the edging. The fourth bed contains blue ageratum, edged with variegated geranium. The fifth, and last of the group is the counter part of the first, viz: Variegated abutilon, edged with Acalypha musaica. The bordering embracing the beds is composed of alternanthera, red and yellow sorts, with the angles filled with coleus. The festooning along the banks consists of pink geraniums, edged with alternanthera and feverfew. Along the line will be noticed century plants, placed here and there.

The description of the first set will give an idea of the kind of the plants necessary in a combination of this kind.

At the end of the second division will be observed a pond of water lilies. A flight of steps leads across the beds from road to road at this point.

Visitors to Philadelphia in late summer would be charmed to see this example of bedding. Though there is beauty from the time the plants are set out, it is at the time stated, when the foliage plants as well as the flowering ones are in their prime, that the display is magnificent.

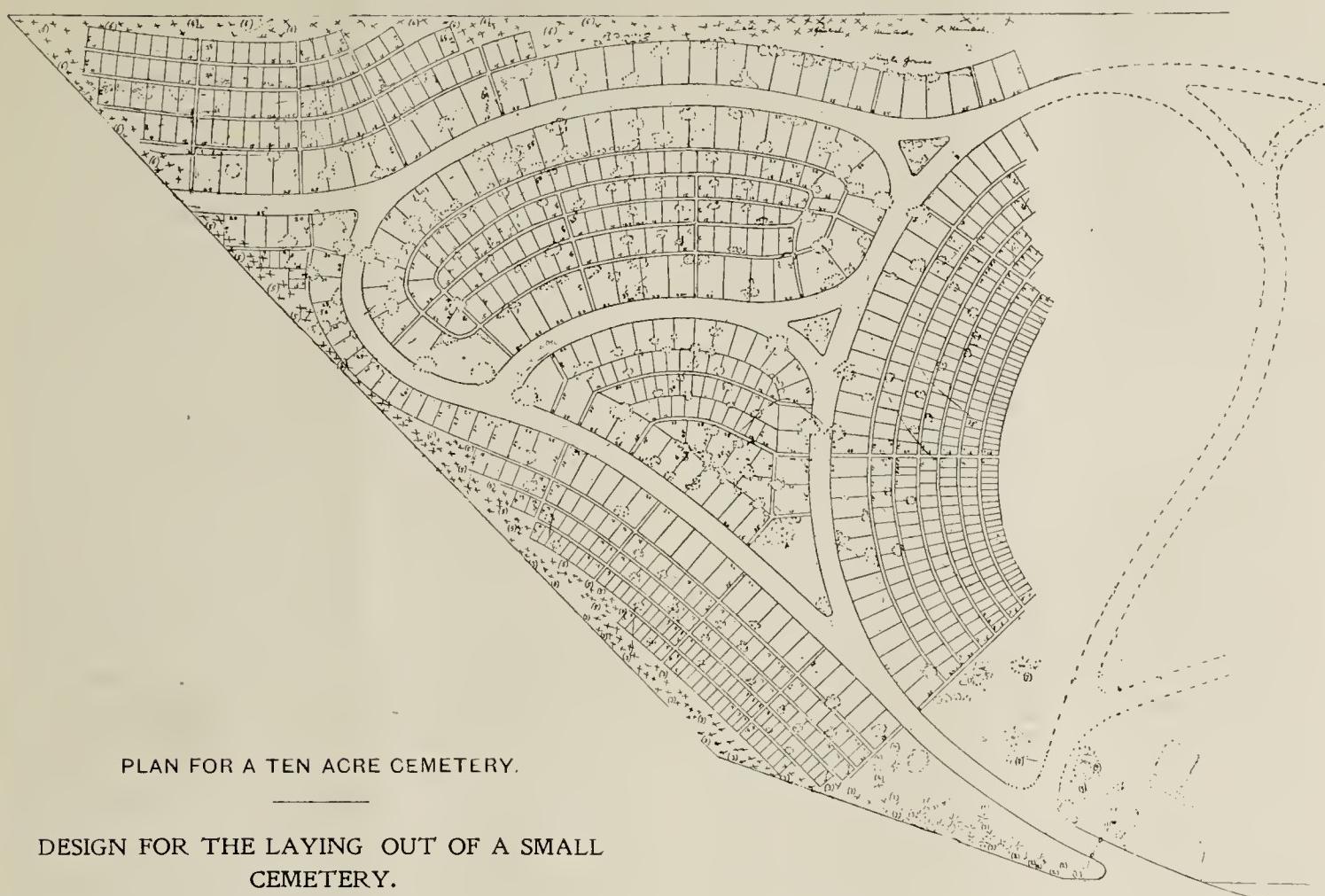
The European planes which border the line of the beds are now of splendid appearance. They were planted, Mr. Miller tells me, in 1878, making the time just twenty years ago. The distance between the trees

is about 75 feet. I found by measurement a few days ago that the circumference of trunk, at two feet from the ground, is about seven feet, the height about 60 feet, and spread of branches 50 feet. These trees were some of the first used in this way in these parts, and so pleasing is their appearance, that their use has been greatly promoted elsewhere.

While this species of plane looks like the native one to the general observer, planters well know the difference. The native sort does not leaf out until late in the season, and it drops its foliage early, besides that it does not make as pretty a tree as this.

Much has been written of the beauty of the planes in Paris and along the Thames Embankment, London. I cannot speak of those at Paris, but I can of those at London, and they are very poor specimens compared with these beauties in Fairmount Park.

Joseph Meehan.



PLAN FOR A TEN ACRE CEMETERY.

DESIGN FOR THE LAYING OUT OF A SMALL CEMETERY.

The above illustration gives a design for the laying out of a cemetery of some ten acres, on the latest and most approved principles now governing the plan of a modern cemetery.

In this instance the tract has a variation in level of some 65 feet, ranging from the entrance to the highest point which lies at the rear of the plot, and the design of the road plan is arranged on this condition, and they are kept as far as possible on the lower level. They are designed to be 20 feet in width and to be of easy grades, and furthermore are so laid out as to have all lots accessible.

The disposition of the lots in the sections has been to plat all the larger lots on their margins.

The general arrangement shows an attractive design, the curves are unquestionably graceful; the long reaches easily merge into the sharper curves, again to take on a gentle sweep to the next turn. Every part of the grounds is also well provided with road facilities, and, moreover, there is ample provision left in the road plan for ornamental planting, to secure the landscape effects so desirable for a cemetery looking to permanence.

Throughout the illustration will be seen irregular markings which are intended to indicate suggestive locations for planting deciduous trees and groups of shrubs. The boundaries should be planted with pines and spruces.

It is essential in these times of progressive cemetery work, to make ample provision for decorative planting. The country is being educated to the desirability of artistic out-of-door landscape work, and the fact that "perpetual care" of our cemeteries is one of the doctrines of cemetery management most earnestly and urgently advocated, makes it the more obligatory upon all promoters of such properties to see to it that nothing is omitted to secure proper and careful attention to this feature of practice. If properly considered at the start half of the battle is won and the result will be felt not only in the business affairs of the cemetery but more particularly in the general interest which will make the enterprise successful in all particulars.

There is no excuse to-day for untidy, disorderly burial grounds. So much study has been given to the subject, and so much knowledge gained, that only to an absolute disregard of a community's interests can such conditions be charged.

The design given herewith is by Mr. O. C. Simonds, of Chicago.

Formal gardening does not appear to be so prominent a feature of park gardening this year as in former years, at least it is not receiving so much attention. It has unquestionably been carried to extremes and a reaction is now apparent.

CARE OF LAWNS.

HOW TO PREPARE THE SOIL.—WHAT FERTILIZERS TO USE.—ABOUT SOWING AND OTHER POINTS INQUIRED ABOUT BY READERS.

A well kept lawn is a source of great satisfaction to its owner, but unless it receives constant attention, it will often prove anything but ornamental. Since the introduction of the lawn mower, the appearance of our lawns about residences in the vicinity of large cities, has greatly improved. Our dry climate requires a deeper and richer soil than that of England to maintain a continued green through the heat of summer, yet by preparing and taking care of the ground properly, and keeping the grass cut often, it will grow thick and form a dense velvety turf.

PREPARATION OF SOIL.—Preparing the land for a lawn, the soil should have mixed with it by ploughing, a quantity of peat which has been previously composted and fermented with soda ash, to neutralize its acid properties, and is then well decomposed: then level the land carefully, and see that it is perfectly smooth. The main reason for using peat is that it will retain moisture even in time of extreme drought, and the lawn will not require watering so often as when no peat is used.

MANURING THE LAWN.—Do not cover the lawn all over with stable manure which is to remain there all winter as an offense to the eye, the nostrils and the feet. There is nothing more disgusting than this turning a lawn into a barnyard, and there is no necessity for it. As to the properties that a manure for lawns should possess, they are that they should contain a considerable proportion of nitrogen and phosphoric acid, in such a proportion that the leguminous plants are not encouraged to become too luxuriant, and a good proportion of immediately available alkali. These qualities are most favorable to a vigorous, thick growth, without giving a tendency to run up too much, at the same time they impart a deep, rich green color to the grass, and these important points are obtained by the use of a soluble, odorless, chemical fertilizer, containing 6 per cent. nitrogen, 28 per cent. alkali, 13 per cent. phosphoric acid, using 440 pounds for an acre, costing about nine dollars. It is to be applied broadcast at the rate of one pound to one hundred square feet, costing for the materials to manure one hundred square feet about two cents, or for an acre 440 pounds, costing nine dollars. In application it should be mixed with sand or earth, in order to spread it more equally over the surface, otherwise it is difficult to distribute so small a quantity over so large a space; if not done so, the grass would be very uneven in its growth. When chemical fertilizer is used on

lawns it is readily recognized by the passer by, in the distinctive color of the grass, it being of a bluish green color, instead of the yellowish green color usually seen when other substances are used. This fertilizer can be used to give the lawn two dressings in a season, but only one will be required, unless the ground is exceptionally unfertile.

TIME OF SOWING SEED.—Lawn seed may be sown at any time, provided neither drought nor moisture are excessive; if done early in the season the lawn has every chance of getting into good condition in time to be of use for several months the same year. A dry time is the best for sowing, as raking is then more effectual, and the ground may be walked over with impunity. A calm day should be chosen for this purpose, for grass seed is so light that it is almost impossible to sow it regularly in rough weather. When the sowing is completed, the seed should be lightly raked in, using a rake with the teeth not too close together, so as to disturb the seed as little as possible. If the ground is damp at time of sowing, care should be taken not to walk over the seed after sowing, more than necessary, as it will adhere to the feet, and thus being removed will cause blank places. The sowing being finished, if the weather is dry, roll it with a light roller. This being completed, the ground may be moistened with as fine a spray as possible, so as not to disturb the surface, and may be kept moist as long as the weather remains dry, the best time for watering being the evening. Under favorable circumstances, in about a week's time, the blades of grass will be showing themselves pretty freely, in a fortnight they will have become sufficiently developed and numerous to give a green appearance to the lawn, and in three weeks from the time of sowing, they will require checking in order to make them tiller, or spread at the root, which after a liberal seeding, is the next point to be observed in forming a springy turf.

TOP DRESSING.—American lawn mowers drop the grass as cut, and nothing is carried off, hence the gradually increasing richness of the soil from vegetable accumulations, are one reason why old lawns are better than new. It is a common opinion, however, that top dressing the lawn with stable manure, cast thickly over the lawn, especially in the autumn, and allowing it to remain through the winter, is of great advantage, but the lawn frequently comes out in the spring in the worst possible condition from weed seeds in the manure. It is far better to make the ground as rich as necessary before the lawn is sowed, and to add whatever may be needed afterwards in the form of a chemical fertilizer with no weed seeds.

Andrew H. Ward.

PERPETUAL CARE OF CEMETERIES.

The importance of perpetual care as a leading feature of cemetery management is rapidly absorbing the attention of all interested in promoting the welfare of the cemetery, whether it be in connection with the grave yards of the hamlet or detached settlement, or progressively up through the larger burial grounds of our villages, towns and cities.

Much careful thought has been given the subject, and it has grown to such proportions in public estimation that some states have passed laws regulating its details and the provision of funds out of the sales of lots to ensure permanent establishment.

All new cemeteries of recent years and the majority of the older ones of any considerable size, have adopted the system; and in the case of the older ones, where numbers of their lots have been filled under the old system, strenuous efforts are made and with great success, to induce the owners to endow the management with sufficient funds to care for them in perpetuity. For the ideas of perpetual care appeals most strongly to all thinking people.

There is little or no difficulty in the way of incorporating "perpetual care" into the establishment and control of a new cemetery. It resolves itself into the question of carefully estimating the cost of maintenance of its lots under the varying conditions imposed upon them by their owners, and of setting aside a sufficient proportion of the amount of sales to create a fund under trust in perpetuity to secure their care for all future time. The main point to be carefully taken into account in the provision of such a fund is that the income from such a fund is liable to become less in the future as the interest value of money gradually reaches its base.

That all cemeteries should be placed under the conditions of "perpetual care" may now be taken as a fundamental principle, although it is practically certain that very many by reason of location and other controlling conditions will be obliterated, and their interred absorbed by the cemeteries more advantageously located.

Where additions are made to cemeteries the question of perpetual care is practically the same as with a new plat. The same careful estimate of the probable cost of maintenance under ruling conditions should be made and the proportion of sales to be funded should be calculated to assure sufficient income under all possible contingencies. This is the main question in a nutshell.

Then the varying details should not be overlooked. The cost of maintenance of a lawn lot with markers only to break the sward, presents a far different case to that of a lot, bounded by coping, and more or less occupied with monuments. Even the care of the grass in a lot encumbered by monu-

ments and markers offers a different question for solution, as it would cost more than a clean lawn. This is stated simply to suggest that all details of the question must be carefully noted and ample provision for contingencies allowed.

On the question of the perpetual care of the stonework in a lot, it strikes one from careful thought all around the matter, that this must be the care of the lot owner, who by endowment or other permanent arrangement with the cemetery management, must make sufficient provision for the perpetual maintenance of his memorials. The varying conditions and values pertaining to the memorial question, makes it one less easy of solution, and leaves it an individual rather than a general feature of perpetual care.

Up to the present the percentage of sale value of lots funded for perpetual care in our larger cemeteries has ranged between 15 and 25 per cent. This has not proved itself a safe guide, and looking to the gradual depreciation of the interest bearing value of money, and more serious still, the variable prices charged for lots, it offers no general basis for the just computation of a perpetual care tax. A broad and liberal consideration of the local conditions and possibilities will lead to conclusions of far more permanent value than the assumption of a percentage practiced elsewhere and arbitrarily established upon questionable premises.

For the care of the lots in the older cemeteries, for which provision must be made by their owners, forms have been adopted, of which the following are samples, and which appear to cover the essentials in a legal and concise way:

FORM OF BEQUEST.

I give and bequeath to * * * Cemetery, of the City * * *, the sum of dollars [*or other property, real or personal—describing it*], upon trust, however, to apply the income arising therefrom, under the direction of the Directors, to the repair, preservation or renewal of any tomb, monument or other structure, and the planting and cultivating of trees, shrubs, flowers and plants, in or around lot number in Section in the Cemetery grounds of the said Association; and to apply the surplus thereof, if any, to the improvement and embellishment of the said grounds.

FORM OF RECEIPT

given by cemetery where parties leave money for the care of their lot, either before or after death:

The * * * Cemetery hereby acknowledges the receipt of dollars, from and agrees to invest the same on bond and mortgage, or other interest bearing securities, as the Directors of said Cemetery shall in their discretion deem to be best for that purpose, and to apply the income arising therefrom to the repair, preservation or renewal of any tomb, monument, or other structure, and the planting and cultivating of trees, shrubs, flowers or plants, in and around lot number in Section in the Cemetery grounds of the said Association, and to apply the surplus of such income, if any, to the improvement and embellishment of the said grounds.

In witness thereof, the said, * * * Cemetery, has caused this receipt to be signed by its Comptroller and the common seal of the said Association to be affixed hereto, the day of A. D. 18
Comptroller.

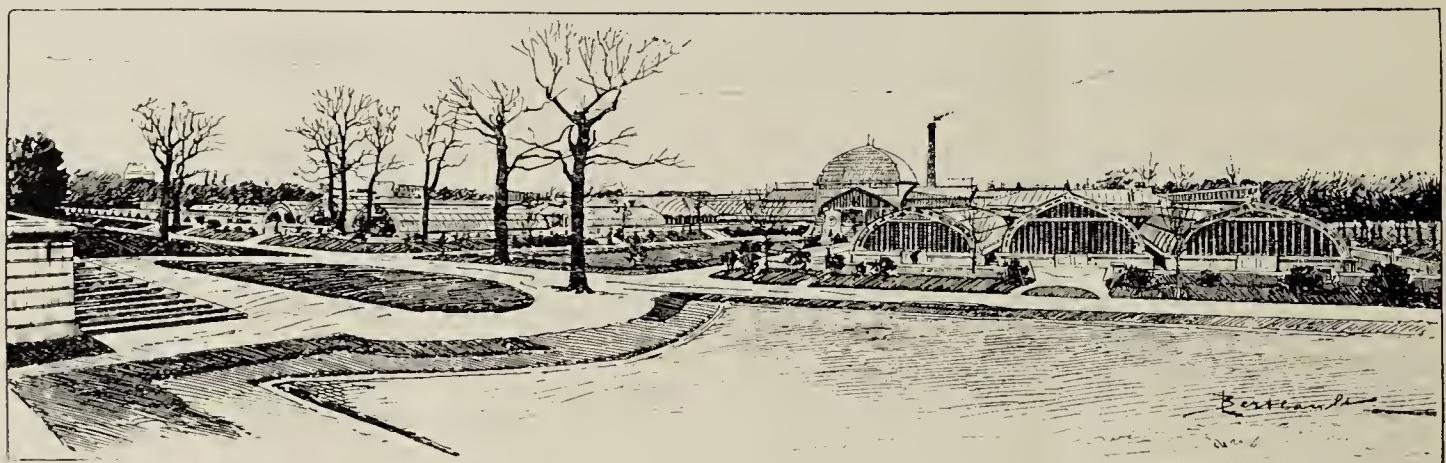
PARK AND CEMETERY.

THE NEW NURSERIES OF THE CITY OF PARIS.

A city may have among its possessions, in its museums, many invaluable art treasures; it may have broad and beautiful streets and monuments of noble proportions, and boast of its seats of learning and science; but it will still be incomplete, if want-

14,086 square metres are devoted to open air culture beds and cold frames; while the gardens (lawns and ornamental features) occupy 30,705 square metres. It extends to the site called the "Fonds-des-Princes."

M. Formige, the clever designer of the prome-



PANORAMIC VIEW OF THE NEW NURSERIES OF THE CITY OF PARIS, AT AUTEUIL.

ing in that captivating and supreme grace which come only from verdure and flowers, the public parks, says *L'Illustration*, in giving the following particulars relative to the new municipal nurseries and greenhouses of the city of Paris.

Paris, ever a coquette, skilled in the art of pleasing, has paid much attention to this laudable means of ornamentation. In 1855, about the time the great promenades of the city were introduced, she created for the sole use of the city, a model establishment, or nursery, at a place known as "George's Field" at Passy. Forty-two greenhouses and numerous culture beds made it possible to cultivate and preserve here the plants intended for the embellishment of the public parks and gardens of the capital and to perpetuate the plants used for the ornamentation of municipal fetes, for distribution as prizes, etc. Twenty years later (1873), it was found that this municipal nursery, called the Fleuriste de la Muette, was insufficient for the city's needs, and at a meeting of the Municipal Council it was decided to transfer the plant to another site. This action was only perfunctory, however, for it was only after twenty years more (November 21, 1893) that M. Quentin-Bauchant submitted to his colleagues a report, the adoption of which removed this old matter from the domain of theory to that of practice.

The form of the new nursery is that of a triangle having for its base the fortifications of Paris, and for sides the departmental route No. 29 from Boulogne to Paris, to the Auteuil gate, and the Boulevard d'Auteuil. Its area, which is three and a half times that of the Fleuriste de la Muette, covers exactly 93,000 square metres. The greenhouses, which are 93 in number, cover 4,796 square metres;

nades of Paris, who made the plans for the nursery, has endeavored to conceal the buildings where the rougher work of potting the plants takes place and where the furnaces are located which make steam for heating the greenhouses. When the visitor enters the principal gate to the nursery, which is situated upon the departmental route from Boulogne to Paris, he sees before him at the foot of a graceful stairway a French garden which stretches away in front of him to the entrance to the principal greenhouse, called the "winter garden." On either side are other greenhouses. At the end of the French garden farthest from him, at the end of the walks leading up to the "winter garden," there is a fountain by Dalou, one of the most perfect works of that master sculptor.

The principal greenhouse, tall, light and elegant,—forms an ideal winter garden, where rare plants, perfectly developed, rise to the roof of the structure, giving to the place the appearance of a small but virgin forest; while a little stream bordered and planted with aquatic plants, winds among the rocks. On the right and left, as prolongations of this building, are other greenhouses devoted to palms. A large and beautiful garden will be secured for the public, and filled with special designs, in that part of the nursery between the main entrance and the passages near the fortifications. The first horticultural establishment of the city was built by piece-meal, and unity not being possible the plants were not always desirably placed, but hereafter all this will be different.

In addition to the advantages enjoyed by this new nursery is the additional circumstance that it is located adjoining the municipal nurseries for

trees, etc., and forms with them a complete whole. The nursery of Autueil where are grown the evergreens, shrubs and perpetual foliage plants, is located, in fact, on the right of the departmental route named; the nursery of Fonds-des-Princes, for growing shade trees for planting upon the streets of Paris, occupies a vast space bordering upon the departmental route and the Boulevard d'Auteuil; while the nursery of Longchamps, also for growing trees and shrubs, is only a short distance away.

The statistics of plants furnished during the past year (July 1, 1896 to June 30, 1897) are interesting:—For the decoration of public gardens and the embellishment of municipal building, etc., there



INTERIOR VIEW OF THE WINTER GARDEN.

were furnished by the city nursery 244,188 autumn plants; 32,865 for spring; and 595,960 for summer. As gifts, there were sent from the nursery, 31,737 plants; and for the decoration of apartments, 77,552 were demanded.

If we add that M. Cler, the head gardener, under orders of M. Gatelier, principal manager, and M. Bouvard, director, employ regularly 95 workmen, we may comprehend the importance of this nursery for the production of flowers and foliage plants for the public parks and gardens of the city of Paris.

* * *

The way in which the municipality of Paris takes care of that city's interests in the line of embellishments is worthy of study.

ARBOR DAY EXERCISES HERE AND THERE.

Much attention has been given in Philadelphia to planting the school yards of the city under the directions of the City Forester, and enthusiasm has again marked Arbor Day and its exercises as a red-letter day for the scholars of the public schools of that city.

In Iowa, the State Superintendent of Public Instruction issues a pamphlet, asking the teachers and people of Iowa to co-operate in observing April 29, as Arbor Day. Tree planting is growing in favor in Iowa, and Arbor Day is a public school holiday of increasing importance.

Arbor Day in Colorado is a legal holiday in the public schools, and special programmes of exercises are carried out. In connection with the day, the *Denver News* says: "If these Arbor Day exercises shall do nothing else than inculcate a sentiment in the next generation, in favor of the preservation of trees and forests, they will have accomplished a most beneficent result." "The planting of trees is a first-class investment for any town, and Arbor Day is always a proper time to inaugurate the movement."

In the public schools of Cincinnati a movement has been inaugurated to include the protection of birds in connection with Arbor Day programmes. The beautiful birds are becoming nearly extinct through the exorbitant demands of women's fashions. The teachers of the public schools have become interested in a movement to prevail upon the women of the country not to wear feather bedecked hats and bonnets. Through the children of the schools they will appeal to them to dispense with wearing feather and aigrettes made of the wings of the bird tribe.

In the State of Wisconsin, the birds are also included with the trees, and Arbor and Bird Day, is a day of uplifting sentiment in the direction of useful and beautiful natural development. The result will surely be a maturity of judgment in all future matters relating to public questions on birds and trees.

In Maryland, the custom of tree planting, for some purpose or another, is growing in public favor, and is also being impressed upon the public schools.

In Kansas, over whose area there is much treeless territory, Arbor Day is attracting, yearly, more decided interest. In Wichita it was made a day of special work in the parks, and every effort was made by the city officials to make it a gala day for the city.

At Riverside, Cal., an Arbor Day is about to be carried out, the main feature of which is to be the planting of a new picnic park by the school children and citizens combined.

GARDEN PLANTS—THEIR GEOGRAPHY, XXVIII.

RUBIALES.

THE SAMBUCUS, GARDENIA AND GALIUM ALLIANCE.

The Monopetalous or Gamopetalous class of plants commences with this alliance. The petals are more or less coherent into tubular, vase like, or cup shaped flowers. Sometimes they vary from



VIBURNUM TOMENTOSUM PLICATUM.—BY COURTESY OF
MR. WILLARD P. PERRY.

these characters, but the plants agree with their tribes in other particulars.

The alliance is founded upon the old world genus Rubia a name applied by the older botanists to some of the American Galiums, but Lindley's term "Cinchonales" better expresses the geography and character of a majority of the tribes.

Rubiaceae in this extended sense are a very handsome group of trees, shrubs, and occasionally herbs, principally occurring in the moist sub-tropical and tropical regions, where they often constitute 1-30th of the vegetation.

The North temperate regions have however shrubby and climbing representatives of the alliance of great beauty, but almost entirely lacking arborescent species; a few of the Sambucus and Viburnums attaining to 15 or 20 feet high. The herbs are often coarse weeds, yet a few have been selected for garden use.

There are 27 tribes, 392 genera, and 4740 species in the alliance.

Adoxa has but a single species known as the "moschatel" and found throughout the northern hemisphere. It is an insignificant plant with whitish flowers.

Sambucus, "Elderberries," have 12 species and several varieties with a wide distribution in the cooler temperate regions and cool mountains of the tropics. They are rare in Africa and absent in the south of that continent so far as known.

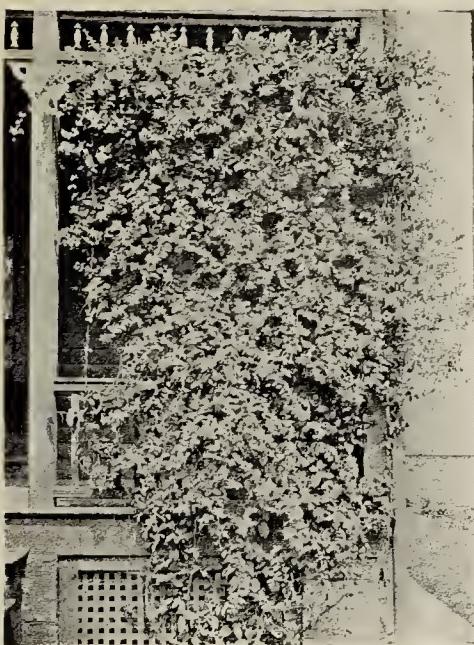
The European *S. nigra* has varied considerably in the form and variegation of its foliage. These variegated varieties stand our suns very well, but are rather coarse. Some varieties grow to a good size, and become as tree-like as anything in the tribe. A bush of *S. Canadensis* is figured in PARK AND CEMETERY, p. 268, 1898. *S. racemosa* is the scarlet fruited, or rarely white fruited elder, widely distributed both in the old and new world. In the Northwestern States it also becomes tree-like, *S. glauca*, and *S. Mexicana* are also often arborescent. *S. Ebulus* and its varieties and *S. Chinensis*, etc., are herbaceous.

Viburnum is an extensive genus of 80 species and many varieties, cosmopolitan in one form or other in all temperate and sub-tropical regions. The sub-tropical species are commonly evergreens, some of which such as *V. tinus* in its varieties, and *V. suspensum* endure beneath shade at southern points. At the north the native and exotic species



VIBURNUM MACROCEPHALUM.—BY COURTESY OF
MR. WILLARD P. PERRY.

are deciduous. *V. Lantana*, *cotinifolium*, *Opulus*, *Lentago*, *Sieboldii* and others flower during May in most parts of the middle Atlantic States. *V. cassinoides*, *tomentosum-plicatum*, *dentatum*, *macrocephalum* and others are somewhat later or from the end of May to June according to season and latitude. I find among my notes a form called *V. "Nepalense"* noted as flowering in July. It is probably



LONICERA JAPONICA HALLIANA.
—Gardening.

sometimes varieties of nudum and prunifolium.

Symporicarpus are the "snow-berries," "Indian currants," etc., in six or seven species, and several varieties. They are North American and Mexican.

Abelia has ten species in China, Japan, the Western Himalayas, and Mexico. They are small shrubs of a sub-evergreen character. *A. Chinensis* (sold as *rupestris*) is quite hardy under trees in central New Jersey and continues full of its pretty little flowers until frost. *A. triflora* is the Himalayan kind, *A. floribunda* the Mexican one.

Linnæa is a pretty little fragrant monotypic evergreen found in all northern regions. Linnaeus accepted it as typifying his neglected career. It grows well in shady places in sphagnum moss.

Lonicera, "woodbine" and "honeysuckle," have 100 species distributed over the temperate regions and tropical mountains of the Northern Hemisphere. The southernmost kinds are evergreen, but if hardy at Northern points, they lose their foliage after the first severe frosts. Both the climbing and shrubby kinds are well known favorites. The European *L. Periclymenum* and its varieties are deliciously fragrant climbers, but singularly subject to the attacks of Aphides. *L. Japonica* in its varieties are more generally seen at the north, and in fact the type form, is abundantly naturalized along the Delaware Valley. *L. Japonica aurea-reticulata* besides being a good climber is often employed as an edging plant for flower-beds. *L. sempervirens* and its varieties are not seen in perfection as often as they deserve; they are often

something going under a wrong name.

Not only are *Viburnums* good flowering shrubs of great popularity, but some as *V. Sieboldii*, *cotinifolium*, *cassinoides*, etc., bear showy fruit. The native species sometimes becoming arborescent are *V. opulus*, *V. dentatum*, *V. Lentago*, and

starved and neglected; this species has flowers varying in color from scarlet to yellow. *L. flava* with fragrant flowers in a capitate cluster, not separated into whorls—is described as distinct, and only found wild (it is said) in two or three localities on the mountains of South Carolina and Georgia—although a similar species has been reported in California, and the 6th ed. of Gray's manual seems to indicate that it is synonymous with *L. Sullivantii*. Wood-bines are the better of a pruning knife sometimes, and if cut back after the early flowering will often flower well in autumn.

The "bush honeysuckles" are in 40 or 50 cultivated forms. Their flowers are often delightfully fragrant and vary in color from white to yellow, pink, and red in various shades. Their fruits too vary in color and during late summer *L. Tartarica* vars., and such hybrids as *Bella* are quite showy. *Morrowii*, *Alberti* and others are quite pretty when in flower, and such kinds should be selected from the nurseries, for several have but little to recommend them, and are decidedly monotonous in expression when out of flower and fruit. Anyone hav-



LONICERA MORROWII.—Gardening.

ing these poor kinds had best plant the better climbing kinds near them to overrun them. Indeed in planting a group it is well to plant with that very purpose in view—because a shrub is a more natural and pleasing support for a climber than any artificial gimcrack.

Leycesteria has 1 or 2 species from the Himalaya and Khasya mountains. *L. formosa* and its variegated form are well worth growing and fairly hardy in the Middle States.

Trenton, N. J.

James MacPherson.

There will be important exhibits by the government at Omaha this summer, relating to Botany, Forestry, and kindred subjects.

* PARK NOTES. *

Under the contract which the commissioners of the Minneapolis parks have for caring and maintaining trees in certain streets and avenues in the city for three years, there were maintained last year trees to the number of 4429. A number had to be replaced, amounting to 113 and 124 new trees were planted.

* * *

President McKinley on March 18th, planted an oak tree in the white house grounds, re-establishing a custom begun a good many years ago, but broken by President Cleveland. The president shoveled the dirt into the hole after placing the sapling. There was no ceremony, although the incident was witnessed by a number of persons.

* * *

There is a proposition before the Massachusetts legislature to create a commission to acquire some 10,000 acres of land including the famous old Greylock Mountain, the pride of Berkshire, for a public park reservation, at a price of \$25,000. As the *New England Florist* says: "Greylock is the great mountain of Massachusetts. It dominates that beautiful section in the western part of the state which has received the title of the Switzerland of Massachusetts. It is to-day a favorite resort, and in the near future, as our population increases, it will hold a first place among the natural attractions for popular enjoyment. To take it now, when it can be acquired for the benefit of all the people, will be an act for the enrichment of posterity."

* * *

Minnehaha Park, Minneapolis, Minn., contains a unique relic in the shape of the first dwelling house built on the site of the city of Minneapolis, west of the Mississippi. It was erected by Col. John H. Stevens in 1849. Under the roof of this house the first town and county governments and the first school district were organized. The first child was born and the first wedding was celebrated under its roof. And in it was first proposed the name of Minneapolis for the city. It was removed to the park on the 28th of May 1896, by the public school children, in detachments, who hauled it to its destination. The building has been restored as far as possible to its original form and condition.

* * *

In a pamphlet on ornamental planting for cemeteries written by Mr. Edw. L. Raymond, landscape architect, of Boston, speaking of the establishment of nurseries, he gives the following reasons, which are equally good for park systems, large or small: 1. Cheapness. Buy small plants at wholesale rates from abroad or from our large nurseries, plant in rows and grow them. 2. Safest. You can lift a plant with dirt on the roots, put it on a hand-barrow thus eliminating jar, and plant the same. The plant suffers no shock and can be moved by skillful treatment long after the shipping season is past. 3. The planter looks over his stock and makes this and that combination in his mind seeing the present relative merits of associating this plant and that.

* * *

In the course of a reply to the criticisms passed upon his system of improvement in the wooded parks, Mr. J. A. Petigrew, superintendent of parks, Boston, says: "Hastily considered criticism of the landscape gardener's effort to improve the condition of growing timber by thinning out crowding trees is probably largely to blame for the deplorable condition of the trees in most of our parks throughout the country. Central Park, New York, contains scarcely one fine specimen of a tree, even in grounds set apart for ornamental work; its woodlands, are forests of bare poles. Prospect Park, Brooklyn, still contains hundreds of nurse trees, planted for shelter to the intended permanent

trees, which they have smothered and malformed, instead of protecting, because they were not cut out when their intended work was accomplished. Much of the planting will have to be commenced over again, the ruin being irretrievable, and all because of the mistaken sentiment against the cutting of a tree."

* * *

English naturalists propose to honor the gentle memory of Gilbert White, author of "The Natural History of Selborne" in a unique way. Near the little village of Selborne, which White has immortalized in his charming book, lies the forest of Woolmer, in ancient times a royal hunting preserve, and still crown property. It has been practically decided that the nation shall assume direct control of this copseclad tract and turn it into what may be styled an asylum for the wild beasts, birds, and insects of England. The British Ornithological society has the work in hand and it is stated that the government looks favorably upon the proposed "White Forest of Woolmer," as the beautiful memorial is to be called. The forest is to be surrounded by a series of defenses sufficient to keep out all unwelcome intruders. At the main entrance will stand a statue of Gilbert White, his hands raised and in the act of liberating an imprisoned bird. Pains will be taken to stock Woolmer with every known species of bird still existing in England; and, so far as possible, to make their new habitation agreeable. Such wild animals as have survived will also be represented. The streams flowing through the tract are too small for any fish other than trout and such small varieties, but these will be fostered. Quantities of butterflies, dragonflies, and whole colonies of bees can easily be liberated within the walls, and once within are likely to remain and fill the shady glens and sunny glades with murmuring insect life. Were kindly Gilbert White alive no one would delight more than he in the proposal to make Woolmer a home for the fowl and the brute, within whose confines the reckless destroyer, man, cannot hunt and kill.

* * *

Childhood and youth have suffered most from the overcrowding in cities, and it may be that in the future great city there will be no place for children; at any rate the present attitude of the city toward the child betrays that tendency, treating him as an insufferable nuisance. There is no room for the child in the tenements and not much more in more comfortable homes. When he escapes to or is thrown upon the street he must become a law-breaker from indulging a natural inclination for movement, exercise, noise and fun. When he acquires sufficient agility to escape the perils of ordinary street traffic, he is still not free from the dangers of constant pursuit by the police. He is not allowed to "walk upon the grass" because this would destroy the only "municipal art" which the municipality prides itself in possessing, which is encouraging and as it should be in the right place, but there are some places in which it is all wrong. He is always chased, sometimes clubbed and occasionally shot at. Other people's children are a constant source of annoyance and complaint of every housekeeper. If the future should disclose a celebrity born and reared in New York in the present decade, it will probably be as a fine example of an enemy of organized society with a grievance against the human race. In spite of all this, the "hop-toads" dance very gracefully in the gutters and the pavement has recently been changed from Belgian blocks to asphalt; and the ardor and enthusiasm of the American small boy, displayed in baseball and football, played upon rough granite for his greensward, is a joy forever and still quite human. Advanced civilization has quite unconsciously deprived the child of his play. Its restoration by providing the opportunity and the place is not particularly an act of charity or a bestowal of merciful privilege, it is but an act of simple justice.—From "The City's Plan" by Julius F. Harder in *March Municipal Affairs*.

CEMETERY NOTES

The trustees of Oak Grove cemetery, Bucksport, Me., are urging lot owners to help the fund now being raised to insure perpetual care. The effort is meeting with response.

* * *

A report on the illegal burials discovered in the cemetery of the Mt. Zion Church, Philadelphia, was submitted to the Board of Health recently, and it was moved to close the cemetery. It covers about 10,000 square feet, and within five years 1563 bodies have been buried there. There are no records previous to that time, but one headstone bears the date 1817. The report held the superintendent of the cemetery responsible for the maintenance of the nuisance in violation of the law.

* * *

The old Boggs Run cemetery, Wheeling, W. Va., suffered severely from the recent floods, which caused a dangerous landslide. The slide cut through the cemetery, moving hundreds of bodies from their resting places. Many have been dug out of the mass of clay and crushed stone, but owing to the fact that all traces of hundreds of graves have long since been obliterated, many of the burying places cannot be located. The cemetery was first opened in 1781, and several of the early interments were the bodies of victims of Indian slaughter.

* * *

Zanesville, O., seems to be particularly well pleased with the condition of the city cemeteries, Greenwood and Woodlawn, under the superintendence of Messrs. Henslee and Van Horne. Improvements have progressed, everything has been carried out on a cash basis, there is no debt, and lot owners are satisfied. Ohio is one of the states which prohibits profit-sharing in cemeteries. If she should go a step further and legislate politics out of all cemetery management, we might look forward to an ideal situation as regards the cemetery.

* * *

The Ladies Cemetery Association, of Mitchell, S. D., which has been a strong factor in beautifying and improving the grounds of Graceland cemetery, is in readiness to take up the work again this year. In comparison it is but a small matter, but their financial statement for the past year is indicative of what energy and business methods, properly organized, can accomplish in our small cemeteries.

* * *

At the annual meeting of the Williamsburg, Mass., Cemetery Association, a unique plan for holding a memorial service in the cemetery some time in June was discussed. It is proposed to have exercises, consisting of remarks of a reminiscent nature, music, and then each grave will be decorated with flowers. Residents of the town, who own lots, will be expected to look after their own. Those who live out of town may either send flowers or money to the committee, who will see that the lots are decorated. The officers, with an auxiliary of eight ladies, will have the arrangements in charge. This plan is intended to increase the interest of lot owners in the cemetery. There is now \$3,000 in hand as a general fund to keep the grounds in order, besides several small sums for individual lots, and excellent results are apparent.

* * *

The board of cemetery commissioners of Grand Rapids, Mich., have adopted the plan of taking care of all lots in their cemeteries, for which they will send bills to the several lot owners. After the first of July next the board will continue to care only for the lots of those willing to pay for the work. In

the meantime lot owners are urged to visit the cemeteries and see for themselves the value of the improvements. Shelter tents will be provided at a charge of \$2. Offices will be built this summer at Valley City and Oak Hill cemeteries. They will be substantial buildings, with waiting and toilet rooms, and offices for the superintendents. Mr. O. C. Simonds, of Graceland cemetery, Chicago, is preparing plans for the laying out of the unimproved portion of Greenwood cemetery, which will be done this summer. The part that is to be improved includes some strikingly beautiful grounds. From a ridge that runs north and south a fine view is obtained of the city, and on the eastern slope is a splendid natural amphitheater formed by the encircling heights. A pretty ravine runs across the north end, filled with oaks, pines, maples, dogwood, wild cherry and wild plum trees.

* * *

It has caused considerable surprise to many to read of the cremation of the body of Miss Frances E. Willard, the great reformer, at Graceland cemetery, Chicago, which was carried out on April 9, in the presence only of Miss Anna Gordon, her secretary and life long friend, Mrs. L. M. N. Stevens, president of the W. C. T. U., and Dr. Perry, of Garrett Biblical Institute. All the plans were kept closely secret, and very few knew what was intended when the remains were removed from the vault at Rose Hill cemetery to the Crematory of Graceland. It was in respect to the expressed wishes of the universally beloved deceased that her body was thus disposed of, as the following from her autobiography attests: "Having the purpose of helping forward progressive movements, even in my latest hours, I decree that the earthly mantle, which I shall drop ere long, when my real self passes onward into the world unseen, shall be swiftly enfolded in flames and rendered powerless harmfully to affect the health of the living. Let no friend of mine say aught to prevent the cremation of my cast-off body. The fact that the popular mind has not come to this decision, renders it all the more my duty, who have seen the light, to stand for this in death, as I have sincerely meant in life to stand by the great cause of poor, oppressed humanity. There must be explorers along all pathways, scouts in all armies. This has been my call from the beginning, by nature and by nurture; let me be true to its inspiring and cheery mandate even unto the last."

The ashes were placed in an urn, and on Sunday, April 10, the urn was buried in the family lot at Rose Hill cemetery, wherein were interred Miss Willard's parents. In direct contrast to the masterful life she had led, were the simple, quiet conditions surrounding her burial.

* * *

Cemetery Reports.

The recent report of the board of trustees of the Island cemetery, Newport, R. I., showed that a large number of lot owners had provided for the perpetual care of their lots, thus displaying a deeper interest in the cemetery. The total net receipts were \$7,640.84, and expenditures \$7,019.04.

* * *

The annual meeting of the Rural Cemetery Company, of St. John, N. B., now called Fernhill, was held recently. The report showed receipts \$6,012.08, including \$9.16 balance from last year. Of this, \$1,826.75 was for sale of lots, \$1,766.40 for annual care of lots, and \$1,025.50 burial, removal and vault fees. The expenditures were \$5,097.77, of which \$2,953.83 was wages, \$1,708.69 sundry charges, and \$1,000 salary of the secretary and superintendent. Considerable new work was done during the year. The perpetual care fund is growing steadily. The receipts for this fund were \$3,149.50, making the total \$9,244.79. Considerable improvement is to be carried out, and a comfortable and handsome shelter house is to be erected.

PARK AND CEMETERY.

CONTRIBUTED CRITICISM.

The Use of Criticism.

Very many of the technical and trade journals treat criticisms as though they were rattlesnakes, poisonous alike to them and their readers; and a scurrilous, unfair, untruthful criticism may be so, but not a fair and truthful and temperate one which avoids personalities. Such critiques are likely to be the most valuable matter which can appear in print. It is true, no doubt, that praise and optimism is the most agreeable to anybody but a born cynic, but no journal devoted to art and culture—no, nor all of them—can do justice to the multitude of good things accomplished, and the good works need but little laudation in any event.

It is the ignorance, the heedlessness, the barbarity, the jobbery, the bribery, and the vice that need more attention than most journals afford them.

Their perpetrators need to be put upon the defensive, and it is a very healthy sign to find that even the least of them are thin-skinned enough to make a defense. The recent communications of a Park Board in repudiation of politics, is one of the best signs of the times, and almost too good to be true. It is certain it would never have been offered had it not been that they were criticised.

Oh! if it could be believed that more of the same sort existed! what hope there would be for the good gardeners of the country. They would no longer look askance at Brooklyn, and Chicago, and Buffalo, and wonder how it happens that the best men fail to stay at those places? They would cease to rack their brains for an explanation of the fact that carpenters and coachmen, cigar makers and chair menders are made Superintendents of Parks, and that gardeners (?) are given subordinate positions under them if they are employed at all. It might be possible to comprehend extravagant expenditures on roads which are never used, and buildings which, however *imposing*, fail utterly and completely to give one atom of evidence that their contents will simplify the acquisition of knowledge by the people.

It is flattering, no doubt, to photograph and print such imposing piles, and give the architect's estimate of their uses and their convertibility. It would be infinitely more useful to criticise them severely, and point out the wastefulness and absurdity of the proposed convertibility, and show that better and more instructive results could be more economically obtained without it.

There is a duty of the Press towards such politicians as deserve shaking, and it savors of cowardice to avoid the issue.

Vindex.

The Power of Example.

All over this vast country of ours the desire to improve the "Cities of the Dead" is manifest. The leaven introduced by the American Association of Cemetery Superintendents a few years ago is producing wonderful results. It would be difficult, indeed, to visit a burial ground, even in the smallest

community, where there is not a desire for improvement over the old order of things.

Many of our Catholic cemeteries, too long neglected, are now, thanks to the efforts of Messrs. Brazill, Reid, Judson, Smyth and others, forging ahead, and can be ranked among the most beautiful in the land.

The force of example, whether for good or evil, is soon apparent, and many are the instances of the influence from having one well conducted cemetery in a locality, that occur to the writer.

The man in charge of a village burial ground on being asked how his place was conducted, proudly replied: "Upon the lawn plan. You must bear in mind that we have Spring Grove as our model."

A short time ago the trustees of our old fashioned burial place awoke to the fact that their grounds were behind the times, and an "up-to-date man" was engaged to remodel the old and construct an addition. This, of course, was received with a lot of opposition by several of the conservative residents of the city, who prophesied all manner of dire things, and loud were the protests at the innovations; but the good work proceeded, and now they are not a little proud of their cemetery, and it is to be expected, will take the flattery much unto themselves: that they alone did it.

Before finishing the work of reconstruction the work was visited by the "Fathers" of several villages in the neighborhood; advice was asked, and freely given, and now within a radius of twenty-five miles there is a decided improvement in the care of the various rural burial grounds. *L. B.*

SHADE TREES FOR A NARROW BORDER.

As the following information will be of general interest and value where similar conditions exist, it may be explained that it is given in reply to a request as to what trees would be best adapted for shade to be planted in a border 18 inches wide along a main walk of a cemetery in the locality of Philadelphia, the trees to be of dwarf habit and compact root growth:

There are four trees which suggest themselves as suitable for this purpose, viz: Magnolia *tripetala*, *Tilia argentea*, Norway maple and the Western Ash-leaved maple. Any one of these would do. The Magnolia would be pleasing, because of its tropical looking foliage and its beautiful pink pods in the fall.

Tilia argentea is the silver leaved linden. The Western ash-leaved maple is quite a different tree from the eastern one. It is more tree-like, and not so spreading, its growth being uniform.

The Gingko tree, *Salisburia*, would also answer if topped a little for a year or two. Left to itself it becomes a tall tree, but topping it sends out the side branches, making of it a beautiful tree. There is springing up a too long delayed demand for this tree. It has been used to a great extent at Washington, where on wide avenues it is very effective.

Association of American Cemetery Superintendents.

G. W. CREEZY, "Harmony Grove," Salem, Mass., President.
ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., Vice-President.
F. EURICH, Woodward Lawn, Detroit, Mich., Secretary and Treasurer.

The Twelfth Annual Convention will be held the coming fall at Omaha, Neb.

The Park and Out-Door Art Association.

JOHN B. CASTLEMAN, Louisville, Ky., President,
L. E. HOLDEN, Cleveland, O., Vice-President.
WARREN H. MANNING, Tremont Building, Boston, Mass., Secy. and Treas.

The next meeting of the Association will be held at Minneapolis, Minn., June 23, 1898.

Publishers' Department

Park Commissioners and Cemetery trustees are requested to send us copies of their reports.

The admonition in regard to mentioning this journal when writing to advertisers, also conveys a still more important suggestion, which is: that those in whose interests PARK AND CEMETERY is published should make it a point to patronize the advertisers using its columns. This is a matter of reciprocity in common justice and fair business dealing. PARK AND CEMETERY urges its readers to bear this in mind, and the mutual exchange of interests will be conducive to benefit all round.

The Juniper Hill Cemetery corporation, Bristol, R. I., has appointed Robert A. Black superintendent of the cemetery to fill the vacancy caused by the resignation of William Faulkner. Mr. Faulkner will remove to Pennsylvania.

At the recent annual meeting of Dell Park Cemetery, Natick, Mass., N. B. Goodnow was elected president, in place of Dea. Wilson who retires on account of ill health. Other elections were: I. N. Hill, clerk; E. Clark, treasurer and trustee for seven years. Extensive improvements are under way in the new grounds.

John M. Hunter, for two years past in charge of Mr. H. Van Rensselaer Kennedy's handsome grounds at Hemstead, Long Island, has been appointed superintendent of parks at Paterson, N. J., and assumed his duties on March 15th. Mr. Hunter is a man of many years experience, and the Park Commissioners of Paterson feel happy over securing a man of Mr. Hunter's abilities.

John R. Johnson, at one time superintendent of parks at Paterson, N. J., but who resigned to accept a more lucrative position at the late Ogden Goelet's summer place at Newport, R. I., is now seeking a location near New York with a view to going into the commercial branch of the business for himself.

RECEIVED.

CORNELL UNIVERSITY AGRICULTURAL EXPERIMENT STATION, ITHACA, N. Y.
Bulletin 144. Notes on Spraying and on the St. Jose Scale. By H. P. Gould.

Bulletin 145. Some Important Pear Diseases. By B. M. Duggar.

Ornamental Planting for Cemeteries. By E. W. L. Raymond, B. S., Landscape Architect, Boston, Mass. This pamphlet condenses a large amount of information on the salient features of landscape work in the cemetery and the plant material available for the purpose. It also includes a long list of pleasing combinations for beds, borders and groups.

Third Annual Report, Board of Public Works, City of Little Falls, N. Y. By courtesy of Stephen E. Babcock, City Engineer.

Eighteenth Annual Report of the Board of Park Commissioners of the City of Minneapolis, Minn., 1897.

Third Annual Report of the Cemetery Board of the City of New Bedford, Mass., for the year 1897.

Eighth Annual Report of the Commissioners of Parks and Boulevards of the City of Detroit, Mich., from January 1, 1896 to July 1, 1897.

Fifth Annual Report of the Board of Park Commissioners of the City of Cleveland, O. 1897.

Twenty-eighth Annual Report of the Buffalo, N. Y., Park Commissioners, January, 1898.

Rules and Regulations of Elm Grove Cemetery Company, Washington, Ia.

Thirty-eighth Annual Report of the Public Park Commission to the Mayor and City Council of Baltimore, Md., for the fiscal year ending December 31, 1897.

Thirtieth Annual Report of the Trustees of the Proprietors of Forest Hills Cemetery, February, 1898.

Erratum.

A bad blunder occurred in the name of the tree illustrated on page 275 of the February issue, which in place of what is given should read ARALIA FICIFOLIA.

Hayward's "Eureka" Weed Killer, for which the Fairmount Chemical Laboratories, N. W. Cor. Broad and Fairmount, Philadelphia, are general United States agents and importers is recommended as safe and effective for clearing gravel paths, etc., of weeds, moss, and other growths. If used as directed, one dressing will keep the paths or drives bright and clear right through the summer, and is therefore a great saving in labor. The company has testimonials from estate owners, head gardeners, council officials, etc., in different parts of Great Britain and will be pleased to send copies on application. It should be given a trial by our parks and cemeteries.

CATALOGUES.

Receipt is acknowledged of the handsome spring catalogue issued by E. T. Barnum, Detroit, Mich., and devoted entirely to chairs and settees, vases, and lawn

ornaments and furniture. These catalogues are being mailed freely to all requiring such goods. The catalogue contains many new and improved designs and will be found, we have no doubt, very useful to anyone interested.

We are in receipt of a valuable catalogue containing 168 pages magazine size, about fifty pages devoted to seeds, sixty to plants, a few to ornamental trees, shrubs and vines, and the balance to the cream of the fruits. This comprehensive catalogue is issued at Painesville, Ohio, by the Storrs & Harrison Company, whose integrity and reliability are unquestioned. Send your address to them on a postcard and it will be sent free.

Descriptive Catalogue of Choice Trees, Hardy Shrubs, Roses, Vines, and Hardy Plants. No. 40, 1898. Fred'k. W. Kelsey, 150 Broadway, New York.—Descriptive Catalogue of Prize Dahlias offered by Lothrop & Higgins, Importers and Growers, East Bridgewater, Mass.

CORRESPONDENCE.

NEWARK, N. J. April 9th, 1898.
Editor Park and Cemetery.

DEAR SIR:—We take this method of informing the members of the A. A. C. S., that our association has the honor of having a lady member, and we hope that some of our members will have the gallantry due a worthy woman to correspond with Mrs. Emma E. Hay, superintendent of the Erie Cemetery, Erie, Pa. It will be recollect that Mrs. Hay was present at the Cincinnati convention, September, 1897. At this convention Mrs. Hay read her report of the Erie cemetery for the current year, which was received with much applause; to my mind it was the most pleasing incident that transpired at the convention. Mrs. Hay writes me that she has been in good health all winter, and has been out on the grounds daily. She has not as yet been able to decide whether she will attend the Omaha convention of 1898,—but she greatly enjoys our annual conventions and returns home feeling that she will try to do more towards improving her cemetery each year. The course she pursues with the lot owners as given in her letter to me is such a sensible action that we give it here: "Ours is an old cemetery and lot owners have been allowed to do almost as they wished to do on their lots, therefore there is great room for improvement; but we have to work very cautiously and talk a good deal to persuade them to see why we are doing certain things, I hope that in time they will be convinced that it is for their benefit as well as ours." We can all imagine the vast amount of work being done by our efficient sister co-worker, and we recommend that some of our members correspond with her, and render such information as might be of use to her in conducting and improving her cemetery. We admire her brave spirit in tackling a situation that but few women would have the courage to encounter, taking in charge the conducting of a cemetery. Let us all do what we can to encourage her in her arduous task.

Chas Nichols.

DEPARTMENT OF PARKS.

PATERSON, N. J., March 10, 1898.
Editor Park and Cemetery.

DEAR SIR:—The statements recently published in your esteemed journal to the effect that Otto Buseck, our late Park Superintendent had been forced to resign through a political move, are emphatically contradicted. They are wide from the mark and emanate from a man who was shown the utmost consideration by this commission. Politics have always been kept out of the proceedings and work of the park commissioners of this city, a body composed of intelligent and influential business men, who are serving the city gratuitously and giving to the park work much of their valuable time. There was no politics in Mr. Buseck's leaving. It is impossible for him to have any at the present time as he is not a citizen of the United States. Six commissioners out of seven favored his removal and a special meeting was called Dec. 27th last to take action, but nothing was done as Mr. Buseck had expressed his intention to one of the commissioners to send in his resignation. The board under the circumstances deemed it for Mr. Buseck's own best interests to let him resign. * * * * * What is wanted here, and what we have had in the past, have been men who possessed a knowledge of their business and the practical experience to apply it to the work, whether in the aesthetic branch or in the more practical work of building roads, grading lawns, etc.

The commissioners deplore the fact that your excellent journal did not take the trouble to ascertain the true facts in this matter before assailing it by charging it with allowing "low political principles to govern its work."

Trusting that you will give this the same prominent space as you accorded your charges against the commissioners, we remain very respectfully yours,

The Park Commissioners.

SITUATIONS WANTED, ETC.

Situation Wanted, by experienced superintendent. Thoroughly reliable and competent. Remodelling old or constructing new grounds a specialty. Best of reference, correspondence solicited. Superintendent, care PARK AND CEMETERY.

Wanted a position as Cemetery Superintendent, with several years' experience. Best of references as to character and ability. Address American, care of PARK AND CEMETERY.

A thoroughly competent superintendent of many years experience desires engagement. Highest of references and testimonials, good landscape architect and engineer. Address, A. & E., PARK AND CEMETERY.

Gardener Landscape, English, desires position as superintendent or good assistant of Park, Cemetery or Estate, best of references from prominent places, east and west. Address, B. S. 228 52 st., S. Brooklyn, N. Y.

Hearse Wanted.—Any party having a good hearse for sale would do well to correspond with the Woodlawn Cemetery Association, Superior, Wis.

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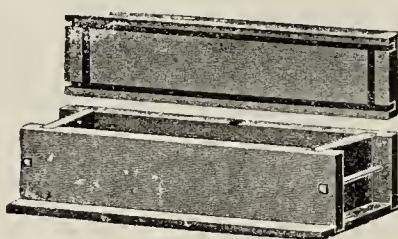


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CONTENTS.

EDITORIAL—SECOND ANNUAL MEETING OF THE PARK AND OUT-DOOR ART ASSOCIATION—THE OBSERVANCE OF DECORATION DAY—WANTED!, A NAVAL CEMETERY IN FLORIDA.....	41
THE PARKS AND OUT-DOOR ART ASSOCIATION—TREES RECOMMENDED BY THE INDIANA HORTICULTURAL SOCIETY.....	42
*RESIDENCE STREETS, IX.....	42
*THE COLES MONUMENT, NEWARK, N. J.—TREES IN STREETS AND ELSEWHERE.....	44
*THE LAUREL OAK, QUERCUS IMBRICARIA.....	46
SEASONABLE HINTS.....	47
*ROYAL BOTANIC GARDEN, KEW.....	47
*THE MORTUARY CHAMBERS, MUNICH, GERMANY.....	50
*GARDEN PLANTS—THEIR GEOGRAPHY, XXIX	52
RURAL CEMETERIES—SUGGESTIONS FOR ORGANIZERS	54
*ELECTRIC FUNERAL CAR, SAN FRANCISCO, CALIF.....	56
PARK NOTES.....	57
CEMETERY NOTES—REPORTS	58
PUBLISHER'S DEPARTMENT.....	60

*Illustrated.

THE second annual meeting of the Park and Outdoor Art Association, which is to be held at Minneapolis, Minn., June 22-24 next, promises to be of unusual interest if one may judge by the preliminary announcement given in another column. The movement is meeting with the success it deserves, and promises to be one of the most potent factors of this generation in bringing about improved material conditions pertaining to home and community surroundings, than which nothing is more conducive to the moral and physical health of the people. The program contains some excellent papers, besides which the parks, boulevards and beautiful scenery of the locality, to say nothing of the hospitality of the citizens, all promise a delightful and instructive time to those fortunate enough to attend the meeting.

NOTHING more is wanting to prove the desirability of more public holidays than the abuse of such holidays as are now enjoyed. Especially at time of writing do we call to mind

Memorial Day now close at hand. When this day was first instituted it was for the sole purpose of paying homage to the memory of those who fell for their country in the war of the Rebellion, by making a pilgrimage to their graves and in the course of solemn exercises to decorate them with flowers. This is yet done year by year, with perhaps increasing public interest. But, the solemnity of the day, with its hallowed memories is being more and more degraded by association with sports and pastimes, carried to an excess utterly at variance with the higher obligations of the occasion. It is high time that an earnest effort should be made to restore to Decoration Day the high intention which created it, and to return to the simple and appropriate observance of such exercises and recreative duties as the day warrants. There is no need to invest it with a rigid Puritanism, but let us enjoy its privileges in a quite and decorous manner, making it a day of healthful recreation to mind and body, such as its ordinance suggests; and let all who have authority lend themselves assiduously to discourage such an observance of the day as is involved in the promotion and carrying out of road races and kindred coarse sports now so common. Let us enjoy Decoration Day and profit by its memorial attributes.

A RECENTLY published description of the burial place of the remains of the victims of the "Maine" disaster, which were brought from Havana and interred at Key West, suggests the necessity of the government providing a decent cemetery in Florida for its naval or other heroes. It is evident that Key West with its present facilities is not the place, and at least the sentiment of the people, always right when appeals are made to its great heart, will not rest satisfied when it appreciates the situation, until Congress makes suitable and appropriate provision for the burial of such of its fallen heroes as may require or desire to be buried by their country. So far as "Jack" is concerned, he has always been accustomed, so to speak, to a watery grave, but there are times, such as the catastrophe in Havana harbor, and many other occasions, when to pay the respect we owe him, government cemeteries, under the best of care, should be available for his final resting place. From all accounts the burial ground at Key West degrades the service which the American sailor has always so nobly rendered to his country.

PARK AND CEMETERY.

THE PARK AND OUTDOOR ART ASSOCIATION.

PRELIMINARY ANNOUNCEMENT OF THE MINNEAPOLIS
MEETING OF JUNE 22, 23, AND 24, 1898.

Headquarters of the Association will be at the West Hotel, at which the rates are \$3.00 per day and upward. Minneapolis, Minn., is readily accessible from all points by rail. Eastern visitors can take advantage of the fine boat ride through the Great Lakes from Buffalo to Duluth via the Great Northern Steamship Line. Such special hotel and railroad rates as are secured will be announced later.

The mornings of the 22nd (Wednesday) the 23rd, and the entire day of the 24th will be given up to business, papers and discussion. The retiring president will address the meeting, and the following papers have been promised.

Playgrounds and Plazas. By W. W. Folwell.

Plant Propagation for Parks. By Fred Kanst.

Aesthetic Forestry. By B. E. Farnow.

Tree Planting on Public Streets. By Chas. M. Loring.

Appreciation of Natural Beauty. By O. C. Simonds.

The Relation of Public Parks to Public Health. By Orlando B. Douglas.

Small City Parks and Open Air Breathing Spaces.
By Chas. N. Lowrie.

Park Woodlands and Plantations. By J. A. Pettigrew.

The Architect and the Landscape Architect. By A. C. Clas.

The Duties of Park Commissioners. By C. Wahl.

The Influence of Parks on the Character of Children.
By H. W. S. Cleveland.

It is expected that Mrs. Robert Pratt will present the work of children in improving the surroundings of their home and school grounds, and that she will have the assistance of ladies' and gentlemen of other sections of the country who have taken an active interest in this work.

A more complete list of authors, papers and titles will be sent to members before the date of the meeting.

At some time during the afternoons or evenings of the 22nd and 23rd, a banquet is to be given by the citizens; an opportunity is to be given for an examination of the park system, and the invitation of Mr. F. H. Peavey to visit his estate upon the shores of Lake Minnetonka, and to take a boat ride upon the lake, will be accepted. An invitation has also been extended to visit the St. Paul Park System.

At the close of the meeting, arrangements are to be made for an excursion to the Interstate Park at the Dalles of the St. Croix.

TREES RECOMMENDED BY THE INDIANA HORTICULTURAL SOCIETY.

From the transactions of the Indiana Horticultural Society for 1897, we take the following report of the committee on a list of shade trees for Street, Lawn and Park Planting:

FOR STREETS AND ROADSIDES.—Sugar Maple (*Acer saccharinum*); White Elm (*Ulmus Americana*); Norway Maple (*Acer Platanoides*); White Ash (*Fraxinus Americana*); American Lime or Linden (*Tilia Americana*).

TEMPORARY TREES, where quick shade is wanted.—Soft Maple (*Acer dasycarpum*); Catalpa (*Catalpa speciosa*); Carolina Poplar (*Populus monilifera*).

ADDITIONAL TREES FOR PARKS AND LAWNS.—Wier's Cut-Leaved Weeping Maple; Cut-Leaved Weeping Birch; Weeping Mulberry; Camperdown Elm; Mountain Ash; Liquid Amber or Sweet Gum.

This list is intended for the beginner. In a discussion which followed, the Tulip Poplar was suggested as one of the most beautiful of trees, but the difficulty of transplanting kept it from the list. The Black Walnut was favorably noticed, but on account of its creating such a deal of litter on the lawn, making it only fit for the roadside, it was also excluded.

RESIDENCE STREETS.—IX.

PLANTING.—*Continued.*

THE PARKWAYS.

The shade trees along some of the most attractive streets I know have grown from seeds that were planted by the winds or the birds. This has led to the belief that usually an irregular arrangement of trees is better than the ordinary straight row. Such

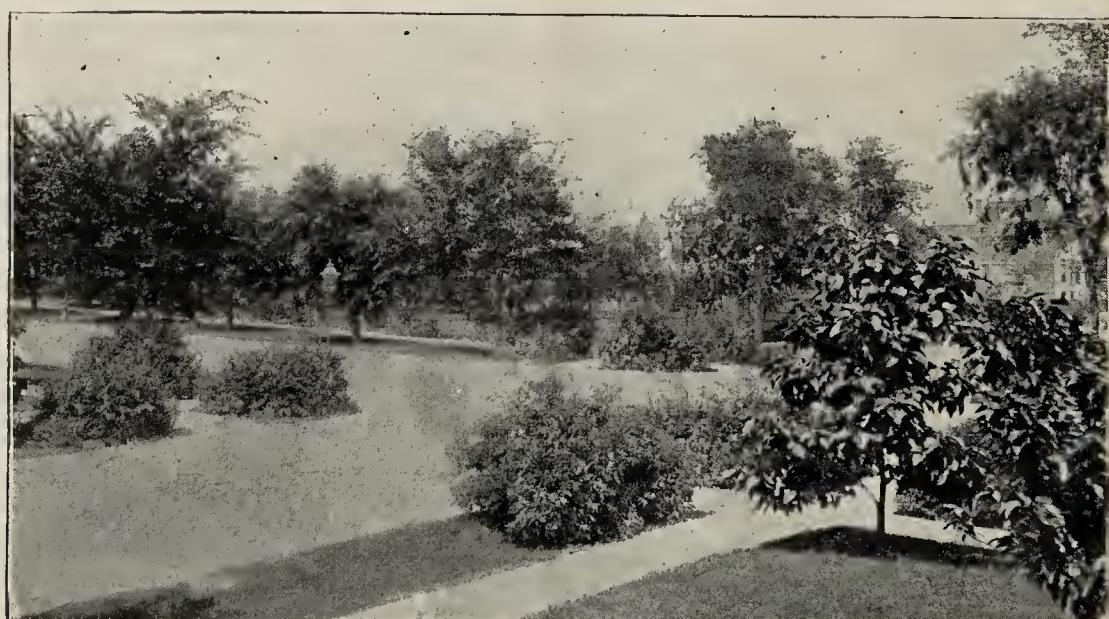


FIG. 13. Showing Street Planting with Park-like Effect. Note the Absence of Curbing.



FIG. 14. Showing a Row of Elms. Although all planted at the same time they have failed to retain their resemblance to each other.

an arrangement with perhaps two trees in one group, then a vacant space followed by one tree or by a group of three or four, then a group of two, and after another space a group of five, and so on through the block, will allow the use of a variety of trees, while a row should be all of one kind and as nearly alike as possible.

Where the street is curved, the planting of broad large growing trees on the side that is convex toward the driveway, and placing shrubs or low trees on the opposite side will tend to emphasize the curvature, just as planting tall trees on a hill increases its apparent height. We often see pleasing effects produced by a growth of hazel bushes, dogwoods, thorns, or other shrubs or small trees from the angle at the foot of the trunk of a large elm or oak. This should teach us to have our street trees often spring from masses of foliage. On the east side of a north and south street, a group of two trees placed on a line running southwest from the house would shade the latter in the afternoon with only the breadth of a single tree while the driveway earlier in the day would get the shade of both trees. A similar arrangement on a line in a northwesterly direction could be used on the west side of the street. A lamp-post often stands at a corner formed by intersecting streets and in such cases, it is not advisable to plant a tree on the same corner but low shrubs would be appropriate.

Sometimes a continuous belt of trees and shrubs is justifiable. Such a case that I have in mind is where one man owns the south frontage of an entire block, the entrance to his grounds being on the north and south street. Here no one would have occasion to cross the parkway and a belt of varied foliage would add to the pleasure of those who drive or walk and give more seclusion to the home grounds. I have mentioned many kinds of trees and shrubs that might be used for such a belt, and more will undoubtedly occur to the observant reader.

Perhaps in nine cases out of ten, those who plant street trees select elms or maples and while these deserve a high place in ones estimation there are many others worthy of selection. In Washington early one September, the elms, lindens, and many of the maples had dropped their leaves while the red oaks were covered with a wealth of bright green foliage, far surpassing in beauty the elm leaves when at their best. In seasons of drouth, I have often seen the red oaks of Illinois fresh and green even when the leaves on other oaks in the same locality were somewhat dull. The burr oak, pin oak, and scarlet oak are also very desirable trees, the latter being Dr. Warder's favorite. The sassafras is a tree that does especially well in light soils. Just now its large yellow buds supported on green branches make it attractive. These will be followed a little later by yellow blossoms, then by thick green aromatic leaves, some entire, some with one lobe and some with two. The tulip tree occupies an important position in the lumberman's list but I think it should have an even higher position



FIG. 15. Showing a country road which will soon become a city street. The authorities wish to remove the irregular belt of large trees and plant rows of elms instead.

as an ornamental tree. Its thick, glossy, truncated leaves are unique in shape, and I always like to see its tulip like flowers which are streaked with orange and yellow. The beech tree ought to have a place in localities where it will thrive.

To go through the entire list, would require an enumeration of about all our native trees, and each tree has some locality where it is especially at home, and should be chosen in preference to all others. The fact that some of the trees mentioned are difficult to transplant should not prevent their use, as



FIG. 16. A Group of Young Locusts marking entrance to private residence.

they will be all the more valuable when they attain their growth. Usually the trees found growing naturally in the surrounding country are the ones that will live longest and give most satisfaction.

O. C. Simonds.

THE COLES MONUMENT, NEWARK, N. J.

The City of Newark, N. J., possesses a monument of unique interest in the memorial to Dr. Abraham Coles, illustrated below, and presented to the city by Mr. J. Ackerman Coles.

The bottom base is composed of a huge boulder weighing nearly 5 tons, which was obtained from Plymouth, Mass. The second base is from Bethlehem, the third from Nazareth, the die from Jerusalem and the cap from Mount of Olives, Palestine, and the whole is surmounted by a bronze bust of Dr. Abraham Coles.

The posts enclosing the monument are from the west shore of the sea of Galilee, the stones for which were brought on camels' backs from the interior of Palestine to the steamer. This compelled some of them being made in two pieces so as not to



MONUMENT TO DR. ABRAHAM COLES, NEWARK, N. J.

overload the camel. Probably the most curious piece in the monument is the little stone cemented in the bottom base; this was taken from the apex of the Pyramid of Cheops, and was obtained, together with some of the original cement used in the Pyramid, which was mixed in the foundation, by a gentleman sent to Egypt especially for that purpose.

The bronze tablets on the face of the memorial bear the verses of Rock of Ages, a national song of praise composed by Dr. Coles.

TREES IN STREETS AND ELSEWHERE.

At a recent meeting of the Massachusetts Horticultural Society, a paper was read by Mr. W. R. Smith, superintendent of the Botanic Garden at Washington, on the subject of Trees, in which he said:

"In Washington where the soil is generally poor, we usually remove two or three good sized cartloads from a hole and replace with the best top soil to be had. We do this in dry weather for obvious reasons; we stir up the bottom and avoid compacting the sides of the same. Do not plant too closely. The character of the trees selected must determine the distance apart. One important aid to success is the tree box. It is doubtful whether by shading the stem of the tree from the sun to prevent scalding, or holding the newly planted tree steady, is its most valuable service. Do not attempt to go into the woods or uncultivated ground for trees, except

as a dire necessity. We were compelled to do this at first, for some things, and were moderately successful with American sycamores, elms, scarlet maples and tulip trees. It is my deliberate opinion that in the interest of economy it is better to get nursery-grown trees. Every city, village or suburban town ambitious for distinction for being well planted with trees, should have a nursery of its own, where healthy trees can be reared. Get clean seedlings from some reliable source, cultivate, prune and train them in the way they should grow, in the best ground attainable. This last suggestion is of great importance. Trees from a poor, thin, gravelly soil, or from a wet, sour, undrained one, are worthless.

"The ash-leaved maple (*Acer negundo*), a herald of spring, with its beautiful green foliage, and its rapid growth, would be an excellent street tree were it not for the bag-worm and web-caterpillar being so fond of it. It should be skillfully pruned to keep it in good health. With the sycamore maple we have had only moderate success. It soon gets covered with seeds, indicating its arrival at maturity, a desirable condition in a fruit, but not in a street tree. Some fine specimens of *Acer campestre* planted on the Capitol grounds have been tomahawked lately, agreeable to an uninstructed, semi-popular request. A variety of this English maple grows more freely and is altogether a larger, different appearing tree, and may, when more abundant, make a street tree.

"The tulip tree is not, in my opinion, a good curb tree, although the park way is planted with it. If the trees are well cared for it will make the handsomest avenue in Washington. Permit me to introduce one which I think is among the best as a curb tree, the Gingko, or maiden hair tree. Two of these interesting trees have flourished in Washington for sixty years or more. Several streets are now planted with them, where they are very fine, and fruit freely. I have never seen an insect near them.

"The Western Rock Elm (*Ulmus racemosa*), is a tree worthy of more attention. A dozen or more as curb trees mixed with other elms are not attacked by an insect as far as my observation goes. It is a good street tree. The 'Wha-hoo' (*Ulmus alata*) is another not attacked by insects. It is worthy of trial in the North. I have only to mention the majestic American elm and say, give it room; it must have room. To say more in New England would be supererogation. Another remark we might make—it bears the knife when young, but not the saw. In after-time only dire necessity should be the excuse.

"Permit me here to name a few probationers for

the office of street decoration, and as sanitary cooling agents: *Phelodendrons amurensis* I think would fill both offices; *Zelkova orinata*, and *Z. acuminata*, *Celtis occidentalis* (American nettle tree) and *C. crassifolia* (hackberry) we would call necessary trees. Birds get the fruit in hard weather, and for this reason we recommend them to be planted in parks and other places. The Japanese Catalpa is of more upright habit than the American species, and is, I think, a probable street tree in some sections. *Ostrya Virginica* (Hop Hornbeam) would make a nice, small, but rather slow-growing street tree. *Kolreuteria paniculata* would be a doubtful candidate for street decoration. I make bold to recommend that much abused tree, *Ailanthus glandulosa*, for certain streets. The objection to this tree is its odor when in flower, which can be overcome by cutting it back every two or three years. The members of the Willow family affect damp, swampy, ague-breeding places, and in various ways are candidates for the high honors of quinine, as a cure for intermittent fever.

"I have never been in favor of spending large sums of money for moving trees, even to satisfy public demand. I have looked in vain for permanent success in this matter. It usually takes a young, healthy tree about the same time to grow up as it does a large one to die, after being removed. Much more might be said on this subject, but it is enough if I show you that it is better to observe and think before spending money on transplanting large trees.

"By cutting back severely, careful watering when necessary, and cultivating with the assiduity of a good farmer towards his corn crop, we reached a phenomenal success in the early days of tree planting in Washington. Another suggestion: do not let dudeisni drive the white-washer from your street trees. If he uses lime, blue or other colored clay, sulphur, lampblack, salt, or other material, he will greatly improve your trees and add to the health of the neighborhood, perhaps killing the much dreaded microbes of diseases as well as scale insects and fungoids. It will not stop horses from nibbing at the bark; woven wire must be used for that. For bad boys who injure trees and for gas leaks it is difficult to suggest remedies. I can only say, mend the latter and try to improve the former. Arbor Day and memorial tree planting should go hand in hand, creating a sentiment of love and veneration for trees."

The month of roses is close at hand, and some of the parks and cemeteries having especially good selections of the beautiful plant, will be at their best. The Wooded Island, Jackson Park, Chicago, is noted for its rose display.

THE LAUREL OAK, *QUERCUS IMBRICARIA*.

What a surprise it would be to the landscape gardeners of fifty years ago could they see the change in the kinds of trees planted today and those of their time. At the present time native trees are largely represented in all plantings, and among these oaks have a conspicuous place. The landscape gardener of the former period could not have gotten native trees and shrubs had he desired them. The nurseries of that day depended on importations from abroad for the stocking of their grounds, and, of course, European trees and shrubs were largely their stock in trade. But of late years our nurserymen have paid much attention to native



QUERCUS IMBRICARIA.

trees, believing them the most desirable for our climate, and this belief has been shared in by our landscape gardeners and by the editors of the leading horticultural papers of the country. Oaks, as stated, are used in great quantities. This is well deserved, because of their great beauty and variety. Thinking now of the latitude of the Middle States, there are as many as twenty good species hardy enough to be used. There are species in many states which are not common in others, so that when we are looking for novelty, as we all do, we can find it in this family of trees. There is, for instance, the Laurel oak, *Quercus imbricaria*, common enough in some states, but rare or entirely absent in others. It is one of the most useful of trees, as witness the illustration of a lovely specimen of it growing in Fairmount Park, Philadelphia. Mr. C. H. Miller, the superintendent, is

justly proud of this tree, not only because of its general merits, but that it illustrates a point he insists on, viz., that the beauty of such trees is enhanced by permitting them to branch from the ground, as this has done. Unless for some special reason, park trees should be allowed to branch close to the ground.

This oak is unlike any other oak in foliage. The leaves are entire, very dark, shining green, and much longer than wide. To those not well acquainted with oaks it would not be thought to be one of that family. There is a southern oak, *Quercus laurifolia*, known also as laurel oak, but this is not met with in cultivation in the north.

There are some oaks, the bicolor and the palustris, for instance, which transplant very well. Others require very hard pruning when removed, and in this class is the imbricaria. The younger an oak the better it will transplant, but take a tree of six feet of any kind, prune it well and its chances of living are very good. Early spring is a good time to transplant, but if done in early fall, the trees closely pruned and then well mulched, to keep the frost from the roots for the winter, but few will miss growing. Close pruning means the cutting away of most all the branches when the trees are of a size that the stem would measure, say 2 inches in diameter, at 1 foot from the ground. Lesser sizes may be trimmed less closely, but oaks need a closer cutting in than other trees of a like size.

Joseph Meehan.

The series of lectures and field meetings which have been a feature of the work in connection with the Arnold Arboretum, Boston, are now in progress and will be continued through June in the Arboretum. They commenced May 7th, and will close June 25th, and are conducted by Mr. J. G. Jack. The purpose of the work is to supply popular instruction about the trees and shrubs of New England. The meetings are held every Saturday at 10 A. M., and every Wednesday afternoon at 3 P. M.

Some 600,000 tulip blooms was the feature of Boston's spring floral display this year—one of the finest displays of this flower ever seen. They were displayed in beds, the groundwork of which consisted of forget-me-nots, pink and white daisies, and pansies in variety, chosen and disposed of to harmonize with the bedding. Boston's public garden was a blaze of brilliant coloring.

In small cemeteries lot owners should contribute to a special fund for procuring flower seeds, plants, etc. A small contribution each from a number of holders would be ample to provide several herbaceous groups besides flower beds.

SEASONABLE HINTS.

Go over all the young trees, and the old ones as well, for that matter, and thumb prune them. That is, rub off all superfluous buds, many of which will now show over the butt of the tree and other places where not desirable. A little care now will save a lot of time in the future, and the trees can be grown in true shape without injury.

* * *

Every one admired the magnificent bed of Acalypha on Mr. Cline's lawn in Woodland Cemetery, Dayton, O., last summer. Its beautiful metallic lustre and its erect habit is sure to make it a favorite for bedding. Some doubt is expressed as to its being suitable in all climates. Will PARK AND CEMETERY readers give us their experiences?

* * *

Do not let this spring pass without planting vines of some kind around the old trees, buildings, fences, etc. Hardy vines are always preferable, but where these cannot be afforded a few packages of seed will give most pleasing results. Morning glories, variegated Japanese hop, Cobea scandens, if properly trained, will soon cover unsightly places with a mantle of green.

* * *

Everyone now fully understands the value of spraying as a protection against injurious insects and fungus enemies. A spraying machine is now as necessary an article of garden furniture as a spade or a hoe. For fungi take two pounds of quick lime slaked in twenty gallons of water, and three pounds blue vitriol in two gallons water. Strain the lime mixture through burlap into blue vitriol water, mix and use with spray pump for all fungous diseases of plants and trees. If it is desirable to kill insects also, add one-quarter pound of Paris Green to this.
—*Meehan's Monthly for May.*

* * *

Ants in the soil can be destroyed by means of bisulphide of carbon: Make a hole about six inches deep in the ant hill with a round dibble, or bar, and into it pour a tablespoonful of the liquid, and immediately close up the hole with soil. The liquid is very volatile and will permeate the soil in every direction and destroy all animal life, and not injure vegetation. It is very inflammable and must be kept away from fire. Ants can often be driven away by sprinkling about their haunts ashes saturated with coal oil. They can be trapped and killed by placing sweet oil where they can have access to it, as they are very fond of it, but it has the effect to close their spiracles and thus kills by asphyxia.
—*From Vicks Magazine for May.*

* * *

Begonia seeds should not be covered says an authority. Merely mix them with a teaspoonful of silver sand and sprinkle them over the surface of the ground from a perforated tin. These are directions for starting seeds indoors, in a box, which should be covered with a piece of glass, and over this brown paper, as seeds germinate best in the dark. The glass must be turned over daily or wiped, and the seedlings must have more light when up, the brown paper being changed for white, so as to give this gradually. When large enough to handle the baby begonias may be picked out with a match cut into a tiny fork and planted in a row in a box of leaf mold, turf mold, soot and sand, each little plant by itself. To stand the box of plants in a tray of lime will keep away wood lice.

ROYAL BOTANIC GARDENS, KEW, SURREY,
ENGLAND.

The following notes are submitted with conviction that a better idea of this pre-eminent establishment is a general desire. I wish to emphasize that they are but *notes* rather than a description.

The present gardens containing 257 acres, are in the Parishes of Kew and Richmond and borough of Richmond. They are situated nine miles from the center of London. The railway station (Kew Gardens) of the District, South Western, and Metropolitan, and Kew Bridge that of the North London, is within five minutes walk of each of the respective entrances.

During the summer, busses, brakes, and river steamers assist in conveying visitors to and fro.

Roughly speaking, the shape of the gardens is wedge-quadrangular, lying in a position of N. E. and S. W. They are bounded on the north by the bank of the River Thames, "Kew Palace" grounds, and an open space (Kew Green); on the east by Kew Green and Richmond Road; on the south by the Queen's private grounds and Richmond Road, and on the west by the Thames embankment and the Queen's private estate. Its topography is virtually flat; a few mounds of varying heights and proportions and several depressions give a slightly rolling appearance to the whole.

The soil is principally sandy-gravel, especially in the south-western portion.

Generally speaking, we may say the northeast quarter is the "Botanic Garden," and the remainder the Arboretum. The buildings are mostly grouped in the Botanic Garden; the large "Temperate House" being a notable exception. The architectural structures include the residences and offices of the Director and Curator; the residence of the Keeper of the Herbarium; three botanical museums; palm-house and other glass houses.

ROYAL BOTANIC GARDEN
AND ARBORETUM,
K E W.

KEY-PLAN



(From Official Map issued by the Kew Authorities.)

Index to Botanic Garden.

PUBLIC ENTRANCES.

- Principal Entrance, Kew Green, C-7
 Victoria Gate, G-8
 Cumberland Gate, Richmond Road, F-8
 Gate A, Entrance from the Arboretum, H-7
 Drinking Fountains, C-7, D-8, F-8
 Ladies' Toilets, C-6, F-8
 Gentlemens' Toilets C 6, F-8, H-8

MUSEUMS.

- Museum No. I, F-8
 Museum No. II, E-9
 Museum No. III, C-7
 Jodrell Laboratory, D-9

TEMPLES.

- Temple of the Sun, D-7
 Temple of Æolus, F-8
 Temple of Bellona, H-7
 Directors' Office, C-8
 Curators' Office, C-8
 Herbarium, B-8
 Students' Garden, B-7

GLASS HOUSES.

- Palm House, G-7
 Water Lily House (15), F-7
 1. Tropical Tree Ferns and Aroids, C-7
 2. Tropical Ferns, D-8
 2a. Filmy Ferns, D-7
 3. Temperate Ferns, D-7
 4. Conservatory, D-8
 5. Succulents, D-8

NEW RANGE WITH COMPARTMENTS

NUMBERED 7 to 14.

7. Heaths, D-8
 8. Begonias, E-8
 9. Store, E-8

Just outside the Botanic Garden, to the north-west, in the palace grounds, the Herbarium is located.

The main objects of interest, in the Arboretum, aside from itself, are: The Temperate House, Pagoda, North Gallery, Lake, Rhodendron Dell, Bamboo Garden, Azalea Garden, and the Pagoda, Sion, Isleworth and Cedar Vistas.

A "moat" encloses the garden on the river side; an 8-foot high brick wall on the north-east and east sides; and a low iron rail fence on the west side, divides it from Crown land.

The principal entrance is at the north-east and between the Curator's office and the Herbarium. Along the Richmond road, the entrances are: Cumberland, Victoria and Sion gates, and the river side is provided for by Brentford Ferry and Isleworth Ferry gates.

With this introduction, we can initiate a brief historical sketch. In this connection, I herewith acknowledge the source of my information as principally the "Kew Bulletins" and "Reports," not infrequently paraphrasing for purpose of accuracy.

According to the Director, Mr. N. T. Thiselton Dyer, its early history commences with a myth. Wm. Turner, however, is reckoned as its founder. Turner was a distinguished scholar and a noted re-

10. Victoria Regia, E-8

11. Economic Plants—Tropical, E-8
 12. Economic Plants—Temperate, E-8
 13. Orchids—Tropical, E-8
 14. Orchids—Temperate, E-8
 Alpine House, E-9
 Rock Garden, E-8
 Wild Garden, E and F-8
 Herbaceous Ground, E-8, 9
 Tank for Aquatics, D-9
 Hardy Ferns, E-7

Index to Arboretum.

PUBLIC ENTRANCES.

- Lion Gate, Richmond Road, M-6
 Brentford Ferry Gate, D-4
 Isleworth Ferry Gate, I-1
 Gate A. Entrance from Botanic Garden, H-7
 Temperate House, J-5, 6
 North Gallery, J-7
 Refreshment Pavilion, K-6
 Pagoda, L-5
 King William's Temple, H-6
 Drinking Fountains, D-4, H-6, I-1, M-6
 Ladies' Lavatory, K-7
 Gentlemens' Lavatory, E-4, I-3 J-7

- Alders, H-4, 5
 Ashes, E, F-5
 Bamboos, G-3
 Beeches, G-4
 Birches, E-4, 5
 Buxus, I-5
 Cedars and Celtis, H-5
 Chamaecyparis, Cupressus, Cryptomeria, Biota, Thuja, Cephalotaxus, Taxus, Torreya, Podocarpus, J, K, L-3
 Chestnuts, H-3
 Elms, E-4, F-3
 Euonymus, I, J-7

- Heaths, Hemlock Spruces, Hickories, Hollies, Hornbeams, Horse Chestnuts, Ivies, Junipers, Larches, Leguminosæ, Limes, Maples, Mulberries, Nuts, Oaks, Pines, Planes, Poplars, Prinos, Rhamnus, Rhododendrons, Silver Firs, Spruces, Vines, Walnuts, Willows, Azalea Garden, Flagstaff,

- H-5, 6 H-5 L-6 I, J-5 F-5 K-6 H-6 I-4 K-3 K-6, L-6 I-7 J-6, I-7 H-6 G-4 G-2, H-2 I-2, 3 G-4 F-4, E-5 I-5 J-7 F-3, G-3 H-4, I-4 I-3 J-6 K-6 I-3, H-4 G-4, 5 I-7

- Prinos, Rhamnus, Rhododendrons, Silver Firs, Spruces, Vines, Walnuts, Willows, Azalea Garden, Flagstaff,

- I-5 H-7 F-3, G-3 H-4, I-4 I-3 J-6 K-6 I-3, H-4 G-4, 5 I-7

- The Dell.—Berries, Clematis, Magnolia, Cotoneaster, Crataegus, Pyrus, Rosa, Rubus, Spiraea, Plums, Cherries, Almonds, Witch Hazel, Aralias.

- H-7, I-7 K-5, L-5

- Dogwoods, Garrya, Honeysuckles, Viburnums.

- Styrax, Snowdrop-tree, Jasmines, Lilacs.

- Elæagnæ, Daphne, Sweet Gale, Aristolochia,

- I-6

- Ribes, Deutzia, Escallonia Hydrangea,

- K, L-4, 5

ligious reformationist, traveler and author. He was born in Northumberland between 1510-15, and was the author of the first English Herbal (1538).

"Sion" on the opposite side of the Thames from the Royal Gardens, was granted to the Duke of Somerset, Lord Protector, on the suppression of the Bridgittine in 1539. It appears that Turner had the direction of the Syon (or Sion) gardens and was physician to the Duke in 1548. Turner's "The Names of Herbes" appeared in 1549, dated from Sion House and dedicated to Lord Somerset. It is possible that he resided at Kew, since in his Herbal, which appeared in three parts 1551, 1562 and 1568 respectively, he mentions his possession of "Cicer" in his "Garden at Kew," but the site of this garden is at present unknown.

In the "Names of Herbes," he mentions a number of localities where native plants are found, mostly in the vicinity of Sion. He died in 1568, his connection, therefore, with the Royal Gardens is not conclusively established, if indeed it ever existed.

The present Gardens are the union of two distinct domains, both Royal—separate, yet in juxtaposition—the Old Richmond Gardens and the Kew Gardens.

Emil Mische.

(Continued.)

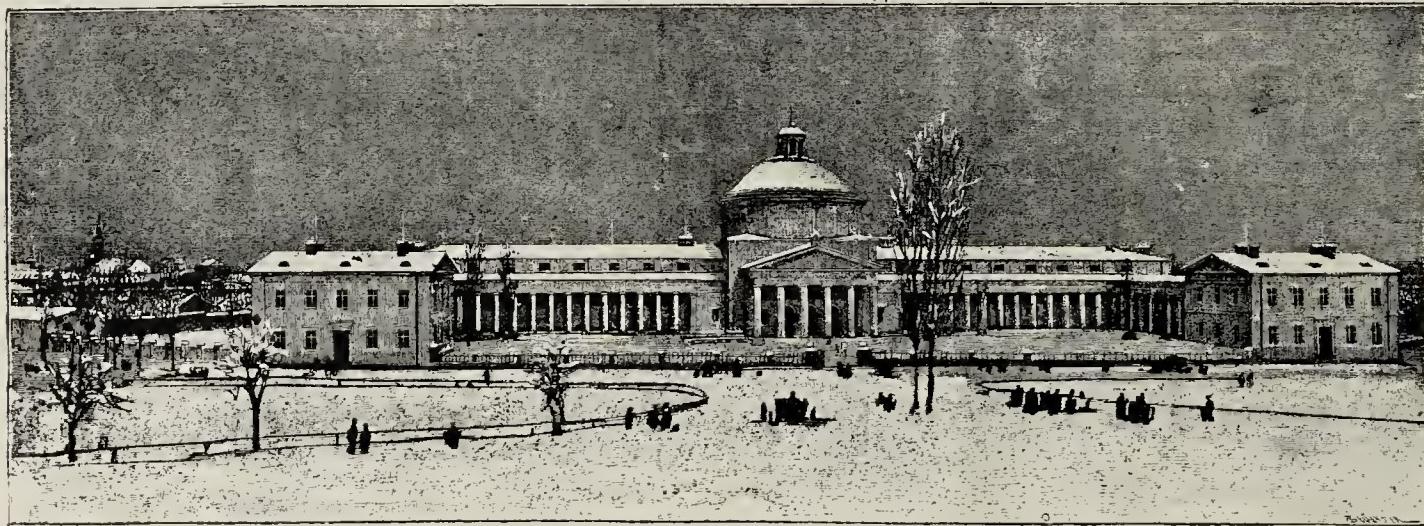
PARK AND CEMETERY.

THE MORTUARY CHAMBERS AT MUNICH, GERMANY.

At Munich, mortuaries with guards to give alarm in case of revivals, have existed since the opening of the cemetery. Their use was at first optional, and of course was quite limited. In 1869, however, after an epidemic of cholera, a police regulation made it obligatory. The inhabitants began by protesting, finding the thought revolting that they were expected to give up their dead; but the authorities were inflexible, and little by little the people have become habituated to a custom, the many advantages of which they now understand and appreciate.

The institution, moreover, works admirably. When a death occurs in a house at Munich, the family informs the police and has nothing further to do with the matter. Half an hour later a physician arrives, who verifies the death and gives permission for the removal of the corpse. At the city hall there is a permanent corps of women attached to the municipal administration, whose business it is to make a final toilet of the dead. One of these women accompanies the physician to the house; she washes the body, clothes it, and places it on the bier, which the hearse then takes to the cemetery. No member of the family accompanies it. According to the regulations, bodies must be removed in twelve hours after death, or in

In a large hall, enclosed by great glass doors, through which all may look in from without, are ranged twenty sarcophagi in three rows. The tops are inclined, have zinc covers, with connections to a receptacle inside for liquid antiseptics. At the head of each sarcophagus is a standard with an arm reaching over the corpse, from which hangs a line, to which is attached a ring, forming a connection with a sounding system, so that the least tension on ring or line causes an alarm. Upon its arrival at the cemetery, the bier is uncovered and placed upon the sarcophagus. The body is then placed at an incline by means of a cushion for that purpose, then the whole is hidden under a mass of flowers, so that often nothing appears but the head and a large card bearing the identification number. The hands are crossed upon the breast, and one of the fingers is passed through the ring attached to the alarm line mentioned. All this is attended to by the employees of the cemetery management, who in general exhibit much taste in their arrangements. Many families photograph their dead as thus laid out, the bier being moved temporarily to a court specially arranged for that purpose. Let it be added that the ventilation is so perfect, and the temperature so regular, that one perceives on entering this hall but little odor, save that of flowers and wax candles. In fact the purity of the



NEW MORTUARY BUILDINGS AT MUNICH.

six hours in case of death from contagious disease. These rules are strictly observed, and often at the end of three or four hours, the dead are gone from where they died.

Munich has ten cemeteries, nine open to all religions, and one reserved for Israelites. Those of the north, south and west are more important than the others. We are indebted to *l'Illustration*, for particulars and reproductions of illustrations, in the cemetery of the North.

atmosphere is very remarkable. The hall set apart for the remains of the rich and that for those of the poor, are side by side, with nothing to distinguish them save the masses of flowers provided in the former. The charges in either case are moderate, the total cost of a funeral, not including the fee for services at the church, ranging between 20 and 120 marks (1 mark = 24 $\frac{1}{4}$ c.) The body remains exposed in the manner described from 48 to 80 hours, entrance to the hall being permitted to near



MORTUARY CHAMBER OF THE CEMETERY OF THE NORTH, MUNICH.

relatives of the deceased, who have also the right to show the body to a priest or to any other person.

Adjoining the exposure halls, and often used as a connection between the two halls, is found the watchman's room, a narrow, cell-like chamber, with windows upon the mortuaries, and containing the alarm apparatus enclosed in a casing, resembling a ship's chronometer. Here the guard, who has a life appointment, spends half his lifetime. He is bound to make frequent rounds of the mortuaries, and can not leave them without providing a substitute to watch in his absence, no matter how short it may be.

The official documents discloses the fact that since 1818 there has been no case of suspended animation authenticated in the mortuaries of Munich. Once, some ten years ago, the guard had his doubts as to the cause of a pronounced alarm. The officials were at once summoned, for observation, but at the end of four hours the scientific men declared that there was not the slightest doubt of the person's being dead. The average annual number of deaths being 10,000, the observation of the establishment for 80 years has covered about 800,000 bodies. This fact is highly credit-

able to the skill of Bavarian physicians in their diagnoses, and seems to prove more especially that contrary to a strong popular impression, it never happens, at least in the great cities, that a person is buried alive.

At Munich, the authorities, desiring to make all these matters still more perfect, have very recently finished at the Cemetery of the West, a great building, which will be the most perfect of its kind in Germany, and will serve as a model for the one which it is proposed to erect at Berlin. One of our views, (that of the New Mortuary), shows this great monument. Under the central dome are a series of chapels, set apart for the different religious sects. On each side is an immense hall on the ground floor, enclosed by glass, where the bodies are ranged in a single row. This hall is flanked on either side by corridors, one of which is given to the public and the other to funerals. The alarms are actuated by electricity. Finally, by a perfect system of heating and cooling, there will be maintained in these exposure halls a constant temperature of 7° C. (44.6° F.), which, according to German scientists, is the temperature most favorable for the preservation of the body.

This elaborate arrangement for getting rid of the dead, profoundly shocks the stranger, who is used to other usage. It is useless to insist upon the advantages resulting to the general hygiene, especially in the homes of the poor, whose lodgings contain often only two rooms, and sometimes only one. It is true, no questions of sentiment are considered, but then no limit is put upon the formalities of respect to the dead which each person or family may choose to pay to their dead. Many persons, moreover, to whom the thought merely of sending the remains of relatives to a mortuary is repugnant, will, perhaps, on reflection, be less severe toward a custom which has the advantage, by this abrupt removal of the dead, of leaving in one's recollection less persistently the face of the dead than that of the living person.

GARDEN PLANTS.—THEIR GEOGRAPHY, XXIX.

RUBIALES.

THE SAMBUCUS, GARDENIA AND GALIUM ALLIANCE.

Diervilla has 7 species from China, Japan and North America. The Asiatic kinds and their varieties are popular beautiful shrubs with flowers



DIERVILLA VERSICOLOR ALBA.

varying through many shades of rosy red, pink and white. There are also good forms with variegated foliage. These plants may often be induced to flower during late summer if pruned in after flowering in May—June.

Cephalanthus "button bush" has six species in temperate and tropical America, tropical Asia, and South Africa. Our native kind so familiar in moist

ground makes a good lawn shrub of from 3 to sometimes 12 feet high. It varies in leaf-form somewhat.

Stephogyne in about 10 species are tropical trees and shrubs. *S. parvifolia* is widely distributed in the drier parts of India, and is of some use as a timber.

Cinchona, in 36 species, from the Andes of South America, are the handsome trees and shrubs whose barks yield quinine; I fear of no commercial use in any of our climates—which are either too low or too dry, too hot or too cold—Cuba or the Philippines perhaps excepted?

Bouvardia has 17 species, all from the warm central parts of America. *B. triphylla* and varieties and *B. ovata* are found along the Mexican border in U. S. territory.

Manettias, with 30 species from sub-tropical and tropical parts of America and Australia, are in South California and Southern gardens in two or three species such as *bicolor* and *cordifolia*.

Exostemma is a tropical genus, but *E. Caribaeum* has reached the S. Florida Islands. It is a fragrant white or pinkish flowered shrub.

Luculia has 2 species from the Himalaya and Khasya mountains. *L. gratissima* is one of the very finest fragrant winter flowering sub-tropical trees or shrubs that can be conceived. It ought to do well in the Southern Citrus belt, choosing localities where the frost would not destroy the flowers.

Pinkneya pubens is the most northerly tree of the Cinchonaceous tribes. It is found along streams and marshy places in South Carolina and Georgia, &c. It is not of any especial value ornamenteally, although it seems to have been kept in collections as far north as Baltimore in the early years of the 19th Century.

Rondeletia, including *Rogiera*, has 60 species, which are mostly shrubs and natives of tropical America; one or two are in South California gardens.

Pentas, in 13 species, are from tropical and sub-tropical Africa and Madagascar.

Houstonia, "bluets" of the Northern States, have some 20 species extending to the warm parts of America. Some 13 species and several varieties are natives, mostly of the South and South Western States. Some forms extend far north, some are prostrate annuals, and some perennials six inches to one foot high, and disposed to be woody at the base. The flowers are in various shades of purple through light blue to white. The genus commemorates Dr. William Houston, who died in Jamaica in 1733 while collecting for the first Botanic Garden in North America, founded by Governor

Ogilvie and the Directors of the Georgia Colony at Savannah.

Mussaenda, in 42 species, from the mountains of tropical Asia, the Pacific Islands and Africa, have bracts reminding us of the dogwoods. Some species ascend to the frost line in South India, as does also a species with pinkish crimson bracts on the Cameroon mountains in West Africa. Seeds were received in Europe in 1863, but the plants were coddled to death, and I cannot learn that the species has flowered in cultivation.

Hamelia, in 6 or 8 species, is from the sub-tropical and tropical parts of America. *H. patens*,

with orange, red and yellow flowers, extends from Brazil through the West Indies to the islands and shore lands of Eastern Florida, and is a promising garden shrub for those regions.

Posoqueria, in 12 species, are tropical American, and not unknown to South California gardens.

Burchellia capensis is a monotypic shrub from South Africa, with handsome orange scarlet flowers. It varies somewhat, in size more than anything, and used to be in collections, but is now rarely seen.

Gardenia has 70 species, widely distributed over the sub-tropical and tropical parts of the world. *G. Florida* and its variety *Fortunei* (from some Cape in China?); *Florida simplici* and its variegated variety, and *G. radicans* and its variegated form, do well at many points at the south but not so well in S. California. There, however, the South African species *Thunbergii* and *Rothmanii*, with long tubular flowers, do better.

Gnipa, in 8 species, is a closely allied genus



HAMELIA PATENS.



COFFEA ARABICA.

from the West Indies and tropical America. *G. clusiæfolia*, with good sized white flowers, is found on the islands of South Florida.

Mitriostigma is the name now given to the deliciously fragrant plant known in greenhouses as *Gardenia citriodora*. This *M. axillare* has much



A FIELD OF YOUNG COFFEE.

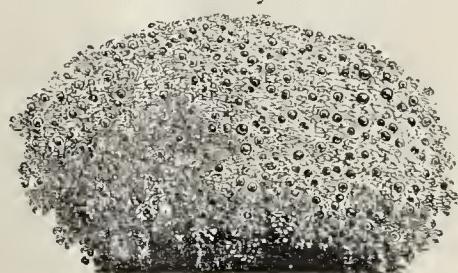
the aspect of the coffee tree, and is said to do very well around Santa Barbara, Cal. There are two or three other species natives of Fernando Po.

Several species of the Guettardeæ, Chiococceæ, Morindeæ and Ixoreæ tribes are found wild in S. Florida, and the coffee tree has fruited as a garden plant both there and in Southern California. It is essentially a mountain plant, yet, the finest field I ever knew was capable of irrigation, and sometimes yielded more than one ton per acre. The illustration shows a field kept down to about five feet high for convenience of picking, but naturally the tree grows to about twenty feet. The fire seen on the mountain side is a felled forest being burned to make way for a new plantation.

Plectronia ventosa and *Psychotria Eckloniana* are small South African trees of this affinity, whose wood is useful for many purposes.

Mitchella is credited with 2 species, the native "partridge berry" and a Japanese form. They have but little to distinguish them, but are pretty little evergreen trailers for rich shady woodland.

Nertera has about half a dozen species from South America, Australia and New Zealand. *N. depressa*, with beautiful berries, is perhaps the



NERTERA DEPRESSA.

most southerly representative of its affinity, being found almost to the borders of the Antarctic Ocean.

Coprosma, in 35 species, are from Australia, New Zealand, Juan Fernandez and Tasmania, &c., some of them reaching low southern latitudes. Some species bear showy fruit, and are reported to be good garden shrubs in California. *C. Baueriana variegata* has been used to some extent as an edging plant for summer flower beds.

Richardsonias, as a genus, are not worth mentioning, except for the fact that a certain school of botanists wish to call them Richardias, and so confuse them with the callas of the greenhouses. Is everybody to be made suffer for Dr. Houston's bad spelling?

Rubia "madder" has 38 species in the warm parts of Europe, Asia and Africa. *R. peregrina*, found in the south western counties of England, is an evergreen plant, with its leaves four or more in a whorl in the way of *Crucianella* and *Galium*. *R. tinctoria* is the plant yielding the dye called "Turkey red" so largely imported (until recently) for the dyeing of calicoes, &c. *R. cordifolia* is the madder of India.

Galium "bedstraws" have 300 species distributed in all warm and temperate regions, but of little use to the gardener unless perhaps to cover rough ground.

Asperula "woodruff" is in 90 species, from Europe, Asia and Australia. *A. odorata* is a British plant, growing well in shade, and a favorite in cottage gardens. *A. azurea setosa* is treated as an annual, and others of the genus might be used. So also might *Crucianella Ægyptica*, *Phuopsis stylosa* and a few others where it is desired to represent their rather curious tribe.

Trenton, N. J.

James MacPherson.

RURAL CEMETERIES—SUGGESTIONS FOR ORGANIZING BY AN OCCASIONAL CONTRIBUTOR.

The tomb of Cyrus was situated in a garden, amidst trees and flowers and running streams. Such is the account of Strabo. To Asia, undoubtedly, belongs the honor of the rural cemetery, as distinguished from the churchyard. The most magnificent tomb the world has known, the superb Taj Mahal, is to-day, as ever, situated in a garden. To the Hollanders belong the honor of introducing the garden cemetery into Europe. The American Colonists always appears to have adopted this style—perhaps necessarily—but certainly often from choice. The whole country is full of testimony to this effect. Some burial grounds are private, many are public, some are cared for, many are neglected.

A village may acquire a cemetery in various ways, the ground may be donated, it may be pur-

chased by the community, or by a society for the community. In any event it should always be held in trust by the village or town, never desecrated, but when built around, and burials cease, it should still be used as a garden, a park, or a recreation ground.

It will always be prudent to select accessible well drained ground. It may be nearly level, and if so, it will be the most economical to improve and manage. In a mountain country this cannot well be, and the crest of a hill may be chosen for its commanding prospect; the summit may be reached by a winding road, and interments made between the levels. Several such examples exist, some of them very ancient indeed. Some are rural, others are necropoli. Whatever the character of the site, and however acquired, its improvements should always be intrusted to a competent gardener. He is at once the most economical and intelligent person that can be engaged for such work. If there is the slightest doubt about competency, ask the nearest known editor or college professor to examine his pretensions, and let the man have full opportunity to show his parts. He may easily be able to examine his examiners, and perhaps produce a work entirely unique, and beyond the pre-conceived understanding of the locality. If he can demonstrate his ability on paper, or on the ground, in reading, writing, pegging out the work, or sketching the effect, you will be fortunate. You cannot expect much from a laborer, you cannot expect much from a mere draughtsman, but from an old and experienced gardener, who has made a study of landscape as applied to this country—you may expect anything and everything that can be done with earth, rocks, water, and the trees, vines, shrubs and flowers which he can use to beautify them.

If he has traveled he will probably treat the whole material as simply, and with as much matter of fact straight-forwardness as a farmer treats a field crop. If there is clearing to be done it will be proceeded with; if leveling, road making, grass sowing, grouping and planting present themselves, they will be undertaken when and where necessary, and then only. Upon the planting will depend the most effective, enduring and economical part of the embellishments. He will be able to present the whole scheme of the vegetable kingdom, or any part of it, for any special or ordinary effect. It ought to be easy for such a man to produce a charming picture, either with a botanical, seasonal or heterogeneous arrangement. Much the same material will be employed in each case, and it will only be somewhat easier to throw it down anyhow, than select it for given purposes. It matters not

whether such men operate in the evergreen parts of the earth or where the trees lose their leaves. They know, or ought to know, the commercial plants of the world since apprenticeship. If they don't, they have no business to touch landscape work either in a cemetery or anywhere. I have dwelt upon this first choice of a man to plant a cemetery at some length, because the whole future of the spot of ground may be made by a competent man, or marred by a pretender.

Once laid out and planted, a cemetery should be placed in the care of a good garden laborer, but any vacancies which occur, any thinning of the planting, any alterations, should be submitted to the designer. *This will be imperative where special effects are aimed at.* There is a wide difference between the knowledge of men who call themselves gardeners. It is a wonderfully comprehensive term, and has been from the earliest historical times.

It will entirely depend upon the wealth and taste of a community how much or how little they will do. The work is not necessarily expensive. A "wild garden" cemetery would need but little other than the periodical weeding of the walks or road. An evergreen cemetery would require the greatest first outlay in plants, but would afterwards be economical, and always interesting and beautiful—and in certain sections of the country pre-eminently so on decoration day. A botanical cemetery would be as elastic as any; it might be planted with plants which would care for themselves, or it might require the constant care of a highly paid superintendent and staff. I think for the ordinary type of rural burial ground—the margin should be reserved for whatever type of decoration is used, and the central plots used for interments—within the garden belt.

A rural cemetery should allow as much liberty to lot owners as possible, consistent with propriety, and the garden or ornamental features enclosing and surrounding should be a distinct feature. The individual taste in epitaphs, monuments and embellishments are most interesting at times, but they are entirely distinct in character, and commonly opposed in the most diametrical manner to the harmony, simplicity, continuity and beauty of any species of educational or decorative planting.

I have remarked that land may be acquired in a variety of ways. A wealthy citizen may donate it to a village, and a memorial entrance may appropriately be erected. The boundary fence may be of any suitable material. The total expense may be great or small. In any case a percentage of the proceeds from lot sales should be set apart for necessary maintenance, and the whole community

should be made trustees through some form of committee.

Organization may be effected through a company, funds subscribed, lands purchased and dividends shared in the ordinary manner. In any event the village should always acquire the property after its abandonment, for public uses. It has commonly been paid for by the people, and it should revert to them in perpetuity. Whenever a community can do so, they should acquire their cemetery grounds from the beginning. There is nothing that I can think of which can more appropriately be held as public property than a cemetery, nothing more essential, nothing that can appeal more to civic pride, nothing that can be made more beautiful and instructive for less cost to the individual citizens.

Magnolia.

In the course of a communication to the Boston *Transcript* relative to the cutting out of so many of the trees in Franklin Park, Mr. James H. Bowditch says: The first ethics of landscape work is to preserve existent beauty; where there is any. Destruction and change are alike to be avoided, or at least not to be resorted to except where special conditions plainly demand it. Our very reasonable contention, therefore, may be plainly stated, viz: That no large body of citizens is asking for or is even desirous that these large trees should be cut down. Why then should they be cut? They are from their very size objects of interest, and the facts that they are past their prime or are not well placed need not condemn them. Some of the finest and most famous landscape paintings represent old trees in various stages of picturesque decay, and I defy any one to find an old tree that does not from some point of view afford interest and pleasure to the beholder. If it is urged that the intention of the park authorities is to create a finer picture twenty, fifty or a hundred years hence, it is quite pertinent for us to reply that there are plenty of such pictures of their recent production coming along to fill this demand and that we deem it a mistake to paint out a good canvas that we can look at for the time being. Let it not be here inferred, however, that the writer and others are opposed to all cutting of large trees. There are often cases where judicious work of this description is imperative to subserve certain useful ends, and where the immediate gain is evident, but the axe should be always used sparingly among old plantations. It is even cheerfully conceded that the trees recently cut were wisely removed, looking only to the material gain from a strict forestry standpoint, but this benefit was in many instances attained at the expense of present good looks, feeling and sound judgment.

ELECTRIC FUNERAL CAR, SAN FRANCISCO, CAL.

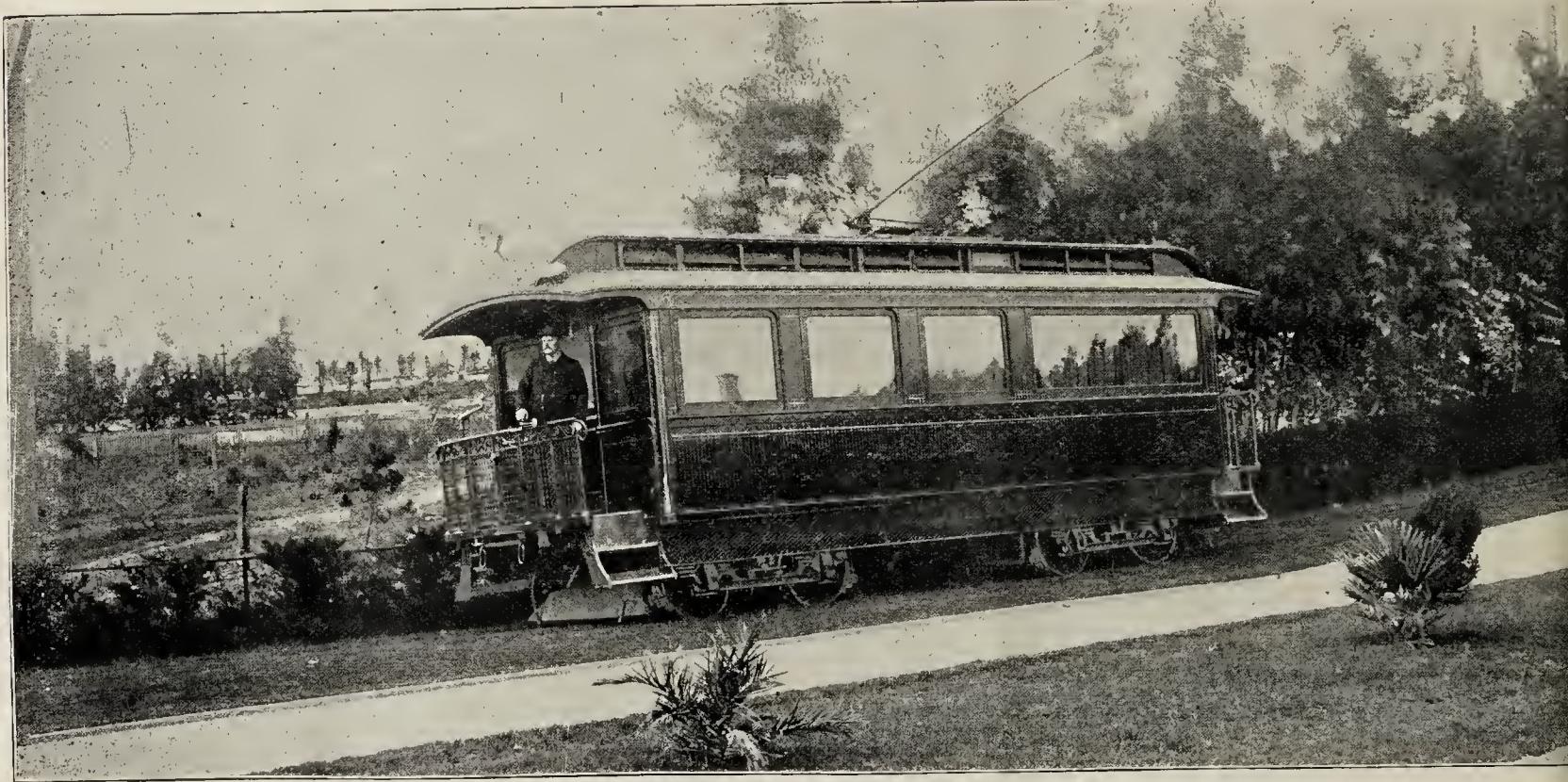
The principal cemeteries of San Francisco are situated in San Mateo County and extend to some twelve miles outside the city. The San Francisco and San Mateo Electric Railway Company's tracks pass the entrances of five cemeteries, and a spur runs directly into the grounds of Cypress Lawn.

The car illustrated herewith was built under the direction of Mr. H. H. Noble, the manager of Cypress Lawn Cemetery, after which it was named. It is a substantially built and elegantly furnished double truck car of the passenger coach type, the interior being finished throughout in black walnut, and it is carpeted and upholstered in harmonious

round trip, with a commission of \$2.50 for the undertaker who makes all the arrangements and takes charge of the funeral.

There was, as might be expected, considerable prejudice at first against this innovation in funeral arrangements, and this was encouraged by the undertakers and hackmen. But it has proved a decided success, and the car is now in daily use, sometimes two and three times, and it has been in demand four times one day, but the interference of time set for funerals stood in the way.

The average time required to make the round trip, including the layover at the cemetery, is two and one-half hours. Fully double this time would



ELECTRIC FUNERAL CAR, SAN FRANCISCO, CAL.—By Courtesy of *Street Railway Review*.

colors. One end of the car, completely separated from the remainder, is set apart for the reception of the casket, and in this part the seats run lengthwise, and is usually occupied by the pallbearers and the flowers and other features of the funeral. The other end of the car has seats arranged on the regulation Pullman plan, but the platform upon which the casket rests can be run through the length of the car, to be loaded or unloaded at either end. It has accommodations for thirty-six persons.

The car can be transferred to several points of the city and the charges, while undoubtedly remunerative to the company, must be equally satisfactory to the public. The usual fee is \$15 for the

be required by the old method of carriages.

The car has now been in use about five years in San Francisco, so it is no new thing, but it has demonstrated its advantages, and it is unquestionably a fact that where cemeteries anywhere in the country are so situated as to be within reasonable access of electric lines, the public will rapidly overcome prejudice and accept with eagerness so comfortable, expeditious and appropriate a means of making a funeral journey.

The Chinese Ning Yong Association, San Francisco, Calif., have acquired about five acres of land in San Mateo county, below and east of Holy Cross cemetery. Hereafter all interments of the association's dead will be made there.

* PARK NOTES. *

Governor Black, of New York, proposes to make a beginning in practical forestry by devoting 25,000 acres of the forest preserve to tree culture under the direction of the experiment officials at the Cornell University station. A bill has been introduced into the legislature appropriating \$5,000.

* * *

The Rural Improvement Association of Keene, N. H., is an active agent in caring for the trees and lawns of the town. Its committee on the destruction of caterpillars' nests has made a record and has reported the expenditure of \$1.50 by means of which about 2,000 nests and two quarts of eggs were destroyed. It is perhaps needless to say that it was voted to continue this work during the coming season, as heretofore.

* * *

Arbor Day was celebrated in Humboldt Park, Chicago, and some 2,000 children participated in the exercises. About 40 trees were planted, including 35 different varieties of maple, which will be a nucleus for an arboretum, and an excellent start for such an object in a public park. A full program of instructive exercises was carried out. The credit for a very instructive and pleasurable observance of the day is largely due to Mr. James Jenson, superintendent.

* * *

From various reports Arbor Day appears to have attracted still more attention this year, and from the many published programmes of exercises carried out in various localities its importance is gaining recognition. In connection with the public schools, not the least effect of its institution is the educating influences it promotes, and as it affects to a greater or less degree many lines of life and work, it tends to broaden the mind of the young and lead the intellect into other channels of thought. One of the offsprings of the Day is the Botanic Club, which may be made a means of both pleasure and instruction, and a valuable helpmeet to the Improvement Society.

* * *

The plan under consideration in Washington to erect statues on the remaining corners of LaFayette Square, has drawn the following from the *Washington Star*: In order to provide a suitable site for the LaFayette memorial, "several of the fine shade trees were removed. It is the opinion of some people if there is such a plan as the above, and if its execution involves the destruction of more of the fine old trees in LaFayette Square, it would be to the present as well as to the future advantage of the city not to have the statues, but to keep the trees. In other words, it is the belief that the statues will not make good the injury to the beauty and attractiveness of the city which will be caused by further inroads upon the splendid old trees which are in some of the public parks."

* * *

The Civic Club of Philadelphia, a woman's organization, whose object is to secure "a more beautiful, a more healthful, a more comfortable public life" is just now receiving the encomiums of the press from many quarters. In dilating upon the matter the *Philadelphia Press* says: That the city's "streets are cleaner than they were five years ago and the city's garbage better collected is due largely to the efforts of the women organized into an active, working society. That there is a more earnest municipal spirit and greater interest in the welfare and prosperity of the city is to be ascribed to the same cause. That a more adequate idea of the duty of being good citizens is being inculcated in the mind of the young is owing to the Children's League

of Good Citizenship established by the Civic Club. That the city has better drainage, better schoolhouses and more small parks, and that more attention is given to art, music, shade tree planting, libraries and decoration is the result of the organized efforts of the women of the city. In fact, there is hardly any department of life in Philadelphia that has not been bettered by the same influence." Here is a wealth of suggestion for village improvement societies anywhere and everywhere. The above remarks are, it is pleasant to say, applicable more or less to several other cities of the union. And we would ask where does not the following, from an address by the lady president of the Civic Club, apply, when we think over the evils vexing our civilization: "We arrayed ourselves not against any one class of men or any one order of shortcoming, but against the general deficiency which at every turn is felt by those who critically examine into the municipal and intellectual facilities which seem to satisfy the average citizen of Philadelphia."

* * *

In a communication from Mr. Warren H. Manning, landscape architect, Boston, on his return from a western trip a few weeks since, he writes as follows on Golden Gate Park: "At San Francisco, I was especially interested in Golden Gate Park, which I am led to believe from my observations must have been the most difficult undertaking in this line that has ever been carried out successfully in this country. The park site was originally drifting sand dunes having a sparse covering of oaks and shrubby lupines. The whole tract had the full force of the winds directly off the broad Pacific. Mr. John McLaren, the superintendent, who is almost wholly responsible for the success attained here tells me that in some cases when the roads were constructed he would return in the morning and find his work covered with sand ten feet deep which had to be shoveled off before construction work could be continued. In other cases he was obliged to plant the surfaces four times in succession before he succeeded in establishing plants. In spite of his best efforts the young plants would at times be blown out root and branch by the wind. The sand was first held in place by plantations of beach grass which is common to both the Atlantic and Pacific coasts. At the same time the seeds of the shrubby lupines were sown. After the surface was once fairly well fixed by the beach grass, plantations of Monterey pines, Monterey cypress, several varieties of acacia and leptospermum were made, which after a time became sufficiently well established to form a shelter for a larger variety of trees and shrubs. The pines will establish themselves and grow a few years on the bare sand. They soon lose their color, however, and after a time fail unless four or five inches of loam is added to the surface. It is surprising then to see what a wonderful difference in growth and color the pines assume after one or two years growth. Golden Gate Park is not one of the parks where all the undergrowth is cleaned out. The plantations along the side of the path and those facing down plantations of larger trees are exceedingly luxuriant. The plantations are distinguished by their breadth and simplicity, for a few varieties that are absolutely reliable at all times predominate. These plants are supplemented however by an immense variety of flowering or edging shrubs, herbs and ground covering plants, but the contrasts are not made so marked as to give the plantations the mixed character that one so often sees. They simulate all that is attractive in natural plantations to a remarkable degree. There are no earth surfaces and no trimmed edges to beds. The whole visible surface is covered with a luxuriant growth of ferns and thousands of hardy flowering plants in many varieties. The most unfortunate feature of the park is the tendency to permit the introduction of architectural structures, statuary, etc., which have no place in a natural landscape. Every student of park planting, can well afford to make a pilgrimage to Golden Gate Park."

PARK AND CEMETERY.

CEMETERY NOTES

Eastlawn Cemetery Co., has purchased a tract of land for cemetery purposes in Delaware Co., Pa., at a point about equidistant from Swarthmore, Morton, Rutledge, Folsom, Millmont and Ridley Park. It is rapidly being put into shape, a few sections being ready for sale. Modern ideas including perpetual care are to be prominent features in its maintenance. The property lays generally high with sandy soil and excellent drainage facilities. Benj. J. Passmore is superintendent.

* * *

The total number of interments in Woodlawn Cemetery, New York, to December 31, 1897, was 52,565, the number for 1897 being 1,944. Of monuments there were erected 177 at an estimated cost of \$115,145, and ten mausoleums of estimated value of \$178,000. The cemetery contains 10.3 miles of roads, of which 54,108 feet are macadamized and 558 feet gravel. Of the 11.3 miles of paths, 11,415 lineal feet are cement pavement, 21,901 lineal feet scrimshaw, 5,511 macadam, and 21,014 gravel. Since March 1, 1898, all lot boundary posts have been set by the cemetery.

* * *

The report of the Marion, O., Cemetery Association shows gratifying results for the year ending April 1, 1897. The receipts from all sources were \$7,762.12 and expenditures \$4,189.90. There was a large increase in available assets for the past year over that previous. A striking feature of the management of this cemetery is the long service of its trustees. The recent death of John L. Hane, draws attention to the fact that he had served as trustee or secretary and treasurer for 30 years. Mr. P. O. Sharpless, an active trustee is in his 34th year of service. The association evidently does not believe that too much change is beneficial in cemetery management.

* * *

The care of the cemetery of Little Falls, N. Y., is vested in the Board of Public Works, under a city ordinance. According to the report of the city engineer, Mr. Stephen E. Babcock, C. E., the section of the ordinance, which requires all payments of whatever kind for cemetery work to be paid in advance, has proved its value, but the section permitting lot owners to employ masons to build graves, foundations, etc., has not only reduced revenues, but the work as a general thing is not nearly so satisfactory. The tax levy for the year 1897 for the care of lots was \$2 per lot, but about one-third of the gross amount of this at time of preparing report remained unpaid. This condition will need remedy.

* * *

In consequence of unsatisfactory cemetery conditions in the past the citizens of Audubon, Ia., have formed a cemetery association. They have secured a tract of about eleven acres on the western slope of one of the rounded prairie hills so characteristic of the scenery of Western Iowa, and from which an extensive view of the surrounding country is obtained. Mr. Frank H. Nutter, landscape architect of Minneapolis, Minn., has spent several days upon the ground in consultation with the directors, and prepared a design for the new cemetery. It is intended to proceed at once with the improvement of the grounds. Here, as in so many other localities, the ladies of the city are taking an active interest in the matter.

* * *

Quite an interesting event in Union Dale cemetery, Allegheny, Pa., was the burial of Lieut. F. W. Jenkins, one of the U. S. naval officers who perished on the "Maine" when it was

treacherously destroyed in Havana harbor. It will be remembered that the body was recovered from the wreck and transported by the government to its final resting place at home. From a description and several photographs kindly sent by Mr. W. Harris, superintendent, it was probably the most impressive and grandest funeral ever witnessed in Western Pennsylvania. None but relatives, friends and the military pageant were admitted to the grounds. The entire lot was covered with matting, and the grave hidden by palm leaves. Among the many beautiful floral offerings was a model of the "Maine" a memorial from his classmates of the Western University of Pennsylvania. The obsequies which beginning with the church service, was succeeded by a lying in state at the Court House, consumed many hours of the day and concluded at the cemetery with "taps" over the grave, the mournful notes of the bugle telling of the rest that had finally come to one of the nation's heroes.

* * *

The propriety, and in fact the duty of the clergy to take a hand in the welfare of the cemetery has often been urged in these columns, and it is gratifying to record that a Sunday Evening Easter Sermon, on "Beautiful Cemeteries" was delivered by the Rev. O. L. White, of the Presbyterian Church at Skaneateles, N. Y. In the course of the sermon he said: "What shall we say of those country graveyards where the myrtle and the ivy run at will, where the slabs stand aslant, the mounds have fallen in, and the ground is a pasture for cattle? Next to a ruined life a neglected grave is about the saddest sight. Ah! you cannot care much for the memory of father and mother if you allow their graves to suffer from neglect. Some day, go back to the old spot, pull up the weeds, trim the willows, cut the grass, straighten the slab, and when you are through put flowers on the graves; and then, as long as you live, keep the place in neat condition and charge your children to do the same after you. There is no want of harmony between the idea of a garden and a sepulchre. Yes; turn your cemeteries into gardens. Plant them with trees and shrubbery. Lay them out in plats and drives and walks. Keep the grounds in perfect order. If possible provide for their perpetual care. Faith in the risen Christ brings cheer into the cities of the dead. It lights up the gloom with hope and glorious expectation."

* * *

Cemetery Reports.

The recently published annual report of Forest Hills cemetery, Boston, Mass., to January 31, 1898, and which also marks the 50th year from its consecration, June 28, 1848, gives the following information: The perpetual care fund now amounts to \$670,732.02, a gain of \$34,710.47 during the past year. The permanent fund for the care of avenues and paths now amounts to \$40,649.20, an increase for the year of \$6,586.23. The net receipts from sales of lots were \$34,887.50, and for single graves \$3,703. Other receipts were: Interments, \$7,391; foundations, \$4,709.25; annual care of lots, \$10,678.35. There was expended for labor and salaries \$47,766.31; material, \$8,251.42; repairs and improvements, \$5,025.03. The total receipts were: \$110,368.06; the total expenditures \$87,551.92. There were 799 interments, making a total of 30,513 in cemetery. 101 monuments and 288 markers, etc., were erected. Two hedges and three curbings were removed. The number of lots sold was 90, and single graves 225. Average number of men employed 77. A large amount of grading was done in preparing lots during the year, and 5,257 lineal feet of grass paths were changed to gravel paths. These are covered with crushed Roxbury stone.

* * *

The three city cemeteries of New Bedford, Mass., which are managed by a cemetery board, according to the last report for the year ending Dec. 6, 1897 received by appropriation \$18,-

⁸00 and from labor on lots \$7,244.98, or a total of \$26,044.98. The general expenditures were \$23,089.99. The sale of lots amounted to \$4,730. The result of the depressed times last year was felt in the lot sales, the demand being for smaller lots and single graves. The number of lots sold was 128, and the total number of interments in the three cemeteries was 599. The number of lots under perpetual care is 448 and the fund amounts to \$41,484.93, which is rapidly increasing. Foundations were constructed for 19 monuments and 23 headstones. The board is in close sympathy with the landscape plan of cemetery improvement and is rapidly effecting what changes are necessary to bring all the cemeteries up to the standard.

* * *

A writer in the Amherst, Mass., *Record*, recently called attention to the unsatisfactory conditions of the three public cemeteries of that town, the funds for the care of which are largely furnished by the town, and in which very few lots are sold and that at a ridiculously low price. For the past few years not over \$20 or \$25 per year has been received for sales in either of the cemeteries. The West, or old cemetery, has no lots for sale, the North, a good number and the South a few. Records have been carelessly kept, and many lots have been taken without paying for them. No funds have been set apart for repairs and consequently the town perfunctorily performs its work. The correspondent concludes: "The question should be soon decided by the town,—How shall our cemeteries be kept in repair in the future? Wildwood cemetery association was incorporated in 1887; one-half of the proceeds of each lot sold is funded for perpetual care, this fund in ten years has reached \$3,000. For the old cemetery after 150 years there is only \$500, given by five persons for care of their lots; North Amherst \$100; South Amherst \$200. The interest of \$500 would give perpetual care for the old cemetery and half that amount each of the others. Why not try for perpetual care of all these cemeteries? Why should not the town move on this question at once, or at least appoint a committee? This fund if raised should be for perpetual care of the whole cemetery and not for individual lots, with nothing for walks on lots uncared for. Decay comes in neglected spots." This is an important question that should now be considered and settled by all towns owning public burial grounds. There are a great number of places similarly situated, and which require a complete change in methods to bring them up to modern conditions.

LEGAL.

LIMIT TO CEMETERY EXEMPTIONS.

Laws exempting property from taxation will be strictly construed. All reasonable intenders will be indulged in favor of the state, and, unless it clearly appears that the property is exempt, it must, like other property, be held subject to taxation. These are general principles laid down by the supreme court of Illinois, in the late case of the Bloomington Cemetery Association against People. The question in this case was whether a certain lot belonging to the cemetery association was subject to taxation. The lot was purchased to connect the cemetery, which it adjoined, with a public street, was inclosed with the cemetery grounds, and was used at first, in part, as an entrance, but later another street was laid out, and the association built a dwelling house and dug a well on this lot. The custodian employed by the association lived in this house part of the time, keeping house, and part of the time boarding with a family living there, under arrangements made with him. One room was reserved and used as an office by the association, and the well was used to provide water for the cemetery grounds. But this lot had not been, nor was it designed to be, platted or used for burial purposes. The association was chartered solely to lay out,

inclose, and ornament a plat or piece of ground to be used as a burial place, with the special exemption that "said piece of ground so held and platted shall be exempt from taxation and execution." Under the rules above stated, and with this special exemption in favor of the association, the supreme court holds that the lot in question was subject to taxation, and was not exempt. It says that it would require a more liberal construction than is applied to the statutes exempting property from taxation to bring within the foregoing exemption clause a separate adjoining lot, purchased, held, and used, not for burial purposes, but for an office and dwelling of the custodian of the grounds, and for a supply of water. Nor does the court consider it exempted by the provision of the state constitution that such property as may be used exclusively for cemetery purposes may be exempted from taxation by general law and by the general law of Illinois that all lands used exclusively as grave-yards or grounds for burying the dead" shall be exempt.

* * *

GUARANTOR REIMBURSED FOR PAYMENT FOR MONUMENT.

Among the various matters of difference set forth by the complainant, the widow of William Cate, deceased, in the recent case of Cate against Cate, were some between her and her step-son, J. R. Cate, one of which latter differences took the form of an assignment of error in the allowance by the chancellor of a claim in favor of J. R. Cate for amount paid for monument placed on family lot. The widow insisted that the monument was bought by J. R. and Gus Cate, and that this was their debt. The proof showed clearly that, while J. R. and Gus Cate gave directly to the dealer the order for the monument, and agreed to see the bill paid, the monument was ordered and contracted for by J. R. and Gus Cate at the express instance and direction of their father, the decedent, William Cate, who notified and approved the contract after it was made, and who was to pay the bill. J. R. Cate, as a security or guarantor of the debt, paid it. Under these circumstances, the court of chancery appeals of Tennessee holds that it was a just claim against the estate, and was properly allowed by the chancellor.

* * *

STATED CAUSE OF ACTION.

The court of appeals of Kentucky has reversed the judgment of the circuit court, Whitley county, in the case of Finley against Hill. Here it was alleged that the plaintiff and other persons named had subscribed, in 1886, to the Woodland Cemetery Company, agreeing to organize a joint-stock company to purchase land and maintain a cemetery on a certain site, and take stock therein to the amounts set opposite their respective names. It was further alleged that the company was duly incorporated; officers elected; and that the company was authorized to purchase a site for the cemetery, issue and sell stock. And it was charged that, by the articles of incorporation, it was the duty of the officers of the corporation to issue stock to all subscribers who had paid for same, and to convey the lots purchased in the cemetery, which they had not done; that the officers had not secured title to the land, though paid for, and that the directors had, without consulting the stockholders, ordered the president to sell off a strip of land 160 feet wide including the graves of several persons. And it was further charged that the directors had entered an order forbidding the sale of any other lots in said cemetery for burial purposes, and declared the ground unfit for burial purposes, and directed the sale above stated and the purchase of other ground for a cemetery. Specific and general relief was asked. The lower court dismissed the petition. But the court of appeals holds that it stated a cause of action against the Woodland Cemetery Company, and that the vendor of the land to the company was a necessary party in an action to compel the officers to cause a deed to the company to be made.

PARK AND CEMETERY.

Association of American Cemetery Superintendents.

G. W. CREEZY, "Harmony Grove," Salem, Mass., President.
ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., Vice-President.
F. EURICH, Woodward Lawn, Detroit, Mich., Secretary and Treasurer.

The Twelfth Annual Convention will be held the coming fall at Omaha, Neb.

The Park and Out-Door Art Association.

JOHN B. CASTLEMAN, Louisville, Ky., President,
L. E. HOLDEN, Cleveland, O., Vice-President.
WARREN H. MANNING, Tremont Building, Boston, Mass., Secy. and Treas.

The next meeting of the Association will be held at Minneapolis, Minn., June 22, 23, 24, 1898.

Publishers' Department

Park Commissioners and Cemetery trustees are requested to send us copies of their reports.

PARK AND CEMETERY has in preparation a series of plans for small parks, with planting schemes for carrying out the ideas of botanical parks, the grouping of alliances, etc., as suggested by the series of articles on "*Garden Plants—Their Geography*".

Not long since a communication was published in these columns from a frequent correspondent commenting upon the comparatively few contributions received from park superintendents. The criticism still holds good. Our readers are kind enough to say some very nice things as to how highly they value PARK AND CEMETERY, expressions always appreciated, but its value could be greatly enhanced by a more general exchange of experiences and observations always common with park and cemetery managers, superintendents, gardeners and others.

Photographs of specimen trees, shrubs, etc., accompanied by brief descriptions or cultural notes, would broaden our horizon. New methods are constantly employed by progressive men, and they should be exchanged for mutual profit and help.

Parks and cemeteries in the smaller towns and villages are coming in for a greater share of attention than ever before. The rural resident is becoming more appreciative of the possibilities of beautifying his surroundings. To such places, however, the expert landscape gardener is seldom called, because of the expense attaching thereto, and therefore the press must supply the demand and the press

must needs get its best help from the practical workers. Give us some help, it will be of mutual advantage.

Important.

The Executive Committee of the Association of American Cemetery Superintendents desires to call the attention of all members, or others interested in cemetery management, to the great importance of the "Question Box" at our annual conventions. Any problem as in connection with cemeteries that may be submitted will be laid before the convention for discussion, with undoubted profit to all. Address, J. Y. Craig, Supt. Forest Lawn Cemetery, Omaha, Neb.

The Omaha Exposition.

The building and grounds of the Trans-Mississippi and International Exposition, to be opened June 1st. at Omaha, Neb., are assuming fine proportions as they near completion; very gratifying to its Board of Managers and all the states that have taken part in this grand enterprise.

In this issue a series of articles on the world famed Kew Gardens is begun. It is hardly necessary to say that these celebrated botanical gardens are situated close to London, England, and that the British government fosters and sustains them. From these gardens have been launched some of the greatest botanists of the world, and the work done has been of such nature that all peoples have been benefited by the knowledge that has been disseminated of the economic value of much of the vegetation of the globe, that has been studied and experimented upon at Kew.

The Twenty-third annual meeting of the American Association of Nurserymen will be held at the Exposition grounds in Omaha, Neb., on June 8th and 9th. Many prominent nurserymen from the western and central states are expected. The planting of the Exposition grounds has been done under Mr. Ulrich, well known in connection with similar work at the World's Fair. As the nurserymen's meeting is the first convention to be held, every effort is being made to have the Horticultural Building, which is one of the most beautiful on the grounds, full and the surrounding grounds in good shape ready for this occasion.

Lord & Burnham Co., of Irvington-on-Hudson, N. Y., moved their New York office on May 1st, to St. James Building, Broadway and 26th street. Their new city quarters give them increased office room besides show rooms where they will shortly exhibit samples of their greenhouse construction, greenhouse heaters, ventilating machinery and other manufactures.

REPORTS, ETC., RECEIVED.

Park Commissioner's Report, Springfield, Mass., 1897. Illustrated with half tones.

Beautifully illustrated descriptive pamphlet of Arlington cemetery, Philadelphia, Pa.

Annual Report of the Board of Park Commissioners of the city of Toledo. 1897. Illustrated with half tones.

Thirty-seventh Annual Report of the Board of Park Commissioners of the city of Hartford, Conn., for the year ending April 30, 1897. Illustrated with half tones.

Fifth Annual Report of the Board of Park Commissioners of the city of Cleveland, 1897. With maps and numerous half tone illustrations.

Third Annual Report of the Cemetery Board, New Bedford, Mass., for the year 1897. Illustrated with half tones.

Calvary Cemetery Association. Charter, By-Laws and Rules. St. Louis, Mo., February, 1898. Illustrated with map and half tone engravings.

Thirty-eighth Annual Report of the Public Park Commission to the Mayor and City Council of Baltimore, for the fiscal year ending December 31, 1897.

Missouri Botanical Garden, St. Louis, Mo. Ninth Annual Report of the Board of Trustees for the year 1897. Illustrated with half tones and diagrams. Prof. Wm. Trelease, Director.

Transactions of the Massachusetts Horticultural Society for the year 1897. Part I.

Report of the South Park Commissioners of Cook County. From December 1, 1896 to December 1, 1897. Chicago 1898. Illustrated with map of Washington Park.

Report of Board of Park Commissioners, Wilmington, Del., for the year 1897. With many half tones.

Lakewood Cemetery Association Annual. Lake City, Minn., 1898.

Transactions of the Indiana Horticultural Society for 1897. Being a report of the 37th Annual Meeting, held in the city of Indianapolis, Dec. 7-9, 1897, together with reports of the Summer Meeting, held in Pendleton, June 15, 16, and of Local Societies, selected papers, etc.

Mount Hope Cemetery, Rochester, N. Y. Rules, Regulations and other information. 1898. Illustrated.

Woodlawn Cemetery, New York. Annual Report to the lot owners for the year 1897, with Rules, Regulations, etc. The report is illustrated with photogravures of several of the fine mausoleums erected in this cemetery, among the most costly in the country.

SUBSCRIBERS are reminded that they will materially advance the interests of this paper by buying supplies of the advertisers in PARK AND CEMETERY, always mentioning the name of the paper when sending inquiries or orders. : : : : :

GREENHOUSE MANAGEMENT—A manual for florists and flower lovers, on the forcing of flowers, vegetables and fruits in greenhouses, and the propagation and care of house plants, by L. R. Taft,

Professor of Horticulture and Landscape Gardening. Michigan agricultural college, and author of Greenhouse Construction. Illustrated, 12mo, 400 pp., cloth. Price \$1.50, postpaid. Orange Judd Company, New York.

This work just published is a companion volume to "Greenhouse Construction," by the same author, although each of them is complete in itself. The author, practically and scientifically a master in the work has given the results both of his own experience, and those of many of the most skillful experts in their respective specialties. It treats of all the plants commonly cultivated by florists and amateurs. Particular attention is paid to the growing of cut flowers, such as roses, carnations, chrysanthemums, violets, bulbs, smilax, ferns, orchids, etc.

The forcing of grapes, strawberries, peaches and other fruits, as well as of such as lettuce, radishes, cucumbers, tomatoes, mushrooms, etc., is explained at length and in a very clear manner. The care and propagation of house and bedding plants is quite fully treated. The directions for treating plants when attacked by insects and fungi; the preparation of the soil, the use of various manures, composts and fertilizers, watering, ventilating, heating, and in fact every detail of the subject to which the work is devoted, receives careful and minute attention.

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Is doing much toward educating us in cemetery lore.—*R. Waring*, Tyrone, Pa.

It is a necessary part of my reading matter.—*Geo. Smith*, Supt., Manchester, Vt.

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I take many periodicals, but none better than PARK AND CEMETERY.—*B. D. Judson*, Supt., Albany, New York.

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It is a valuable and interesting publication.—*J. M. Underwood*, President Minn. Horticultural Society, Lake City, Minn.

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VOLUME VIII OF PARK AND CEMETERY began March, 1898. A few complete volumes can be furnished for the past four or five years. The earlier volumes are broken.

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Cemetery Records

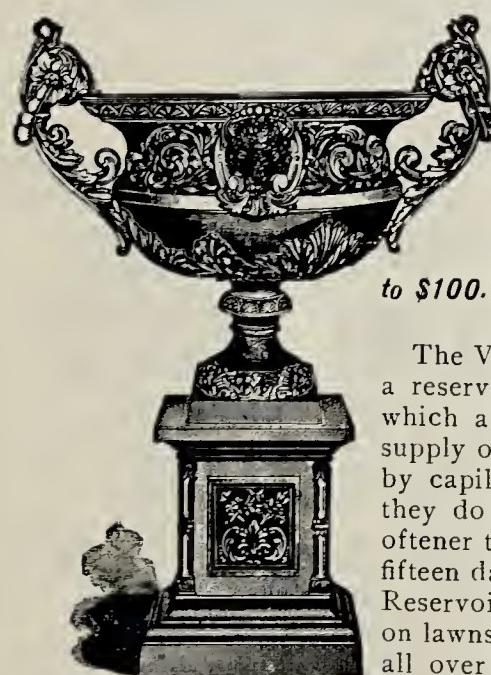
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REFERENCES:

The Greenwood Cemetery, N. Y.; Forest Home Cemetery, Milwaukee, Wis.; R. Ogden Doremus, N. Y.; Cady, Berg & See, Henry J. Hardenburg, Richard M. Hunt, Harding & Gooch, and many other well-known architects, also, MONUMENTAL NEWS.

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A Reflection on our Civilization.

The author of the series of articles on Residence Streets now appearing in these columns would recommend planting more of the flowering shrubs were it not for the fact that we do not yet seem to be sufficiently civilized as a people, to admire the beautiful without destroying it. That he is not far from right in his premises was very forcibly brought home to the publisher of PARK AND CEMETERY a few days ago on discovering that his front yard had been despoiled of a Mugho pine, one of a group that had been sent him from the Douglas nurseries. The little beauty had been pulled up by some passer-by in the night. In comparison with this and similar depredations that are all too common the following incident is not without interest. Eight years ago, a Chicago lady who was travelling in Japan, had her attention called by the guide to an exquisite piece of Japanese carving, that had been set into the gate post at the entrance to the home of a well to do person. The delicacy of the carving caused the American Visitor to express surprise that such a valuable piece of art work should be left out of doors, but was told that the owner took that way of letting all the people enjoy it. Last year, Japan was revisited by this lady and on reaching this town one of the sights which her guide pointed out was the same bit of carving that she had seen seven years before. And her surprise at finding it unmarred in the least particular may be better imagined than described. The Japanese may be commercial imitators of ours but here is one characteristic which they possess as a people in which they are vastly superior to us.

* * *

All the flowers of the arctic region are said to be either white or yellow, and there are 762 varieties.

* * *

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Arborvitae globosa, 2½ feet.
Maples, Norway and Sugar, 10 to 12 feet.

Willow, Golden Bark, 8 to 10 feet.
Purple Beech, Rivers and Seedlings, 5 to 12 feet.

Berberis, Thunbergi, 1½ to 3 feet.
Viburnum plicatum, 5 to 6 feet.
Exochorda, grandiflora, 3 to 5 feet.
Rosa wichuriana, 2 to 6 feet.
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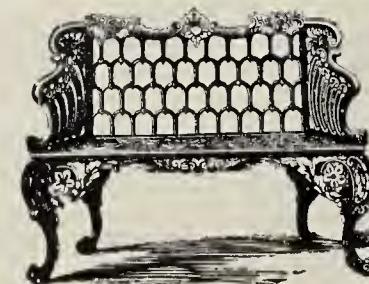
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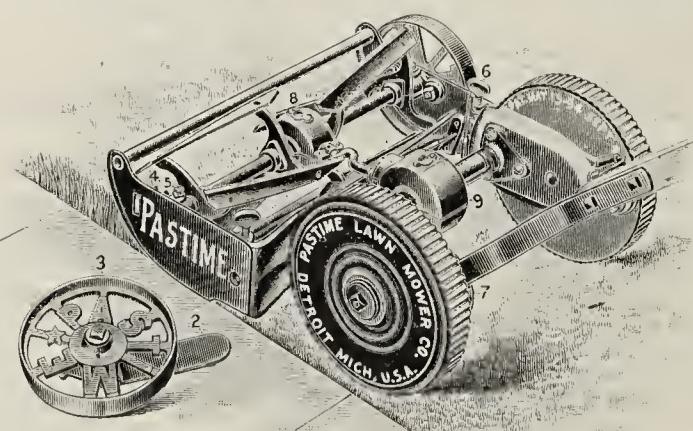
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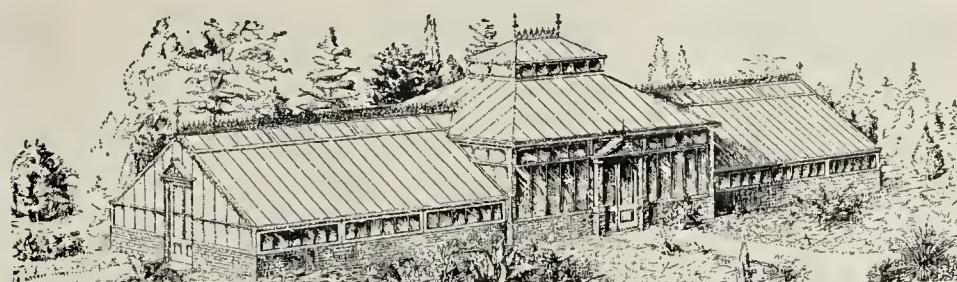


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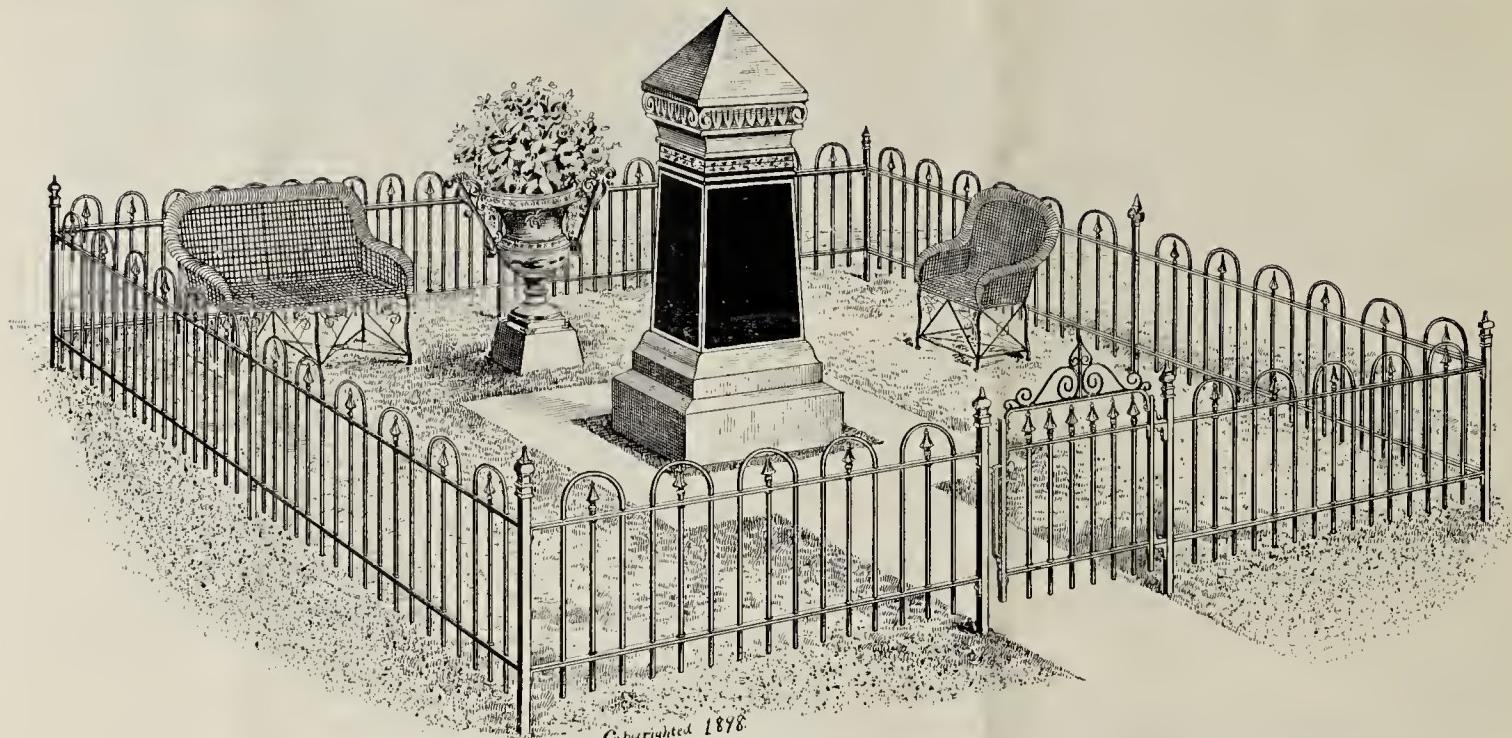


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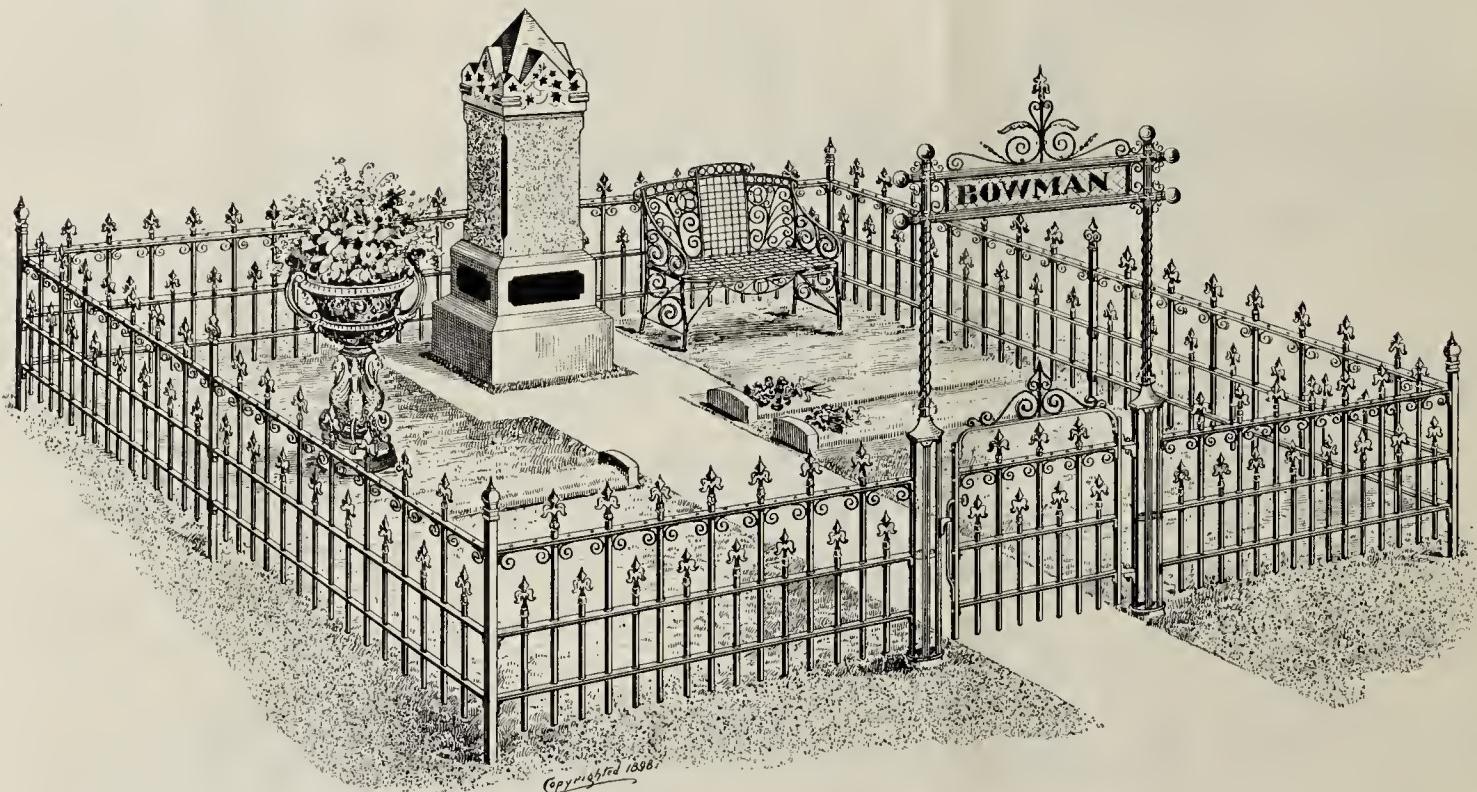
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CONTENTS.

EDITORIAL—THE MINNEAPOLIS CONVENTION OF THE PARK AND OUT-DOOR ART ASSOCIATION — SITE OF THE NEW YORK SOLDIERS' MONUMENT—THE NATIONAL SCULPTURE SOCIETY'S EXHIBITION	61
A MODEL PLAYGROUND.....	62
HORTICULTURAL NOTES	63
*RESIDENCE STREETS, X.....	64
LEGAL	66
*DEVIL'S DEN, GETTYSBURG.....	67
*THE NATIONAL SCULPTURE SOCIETY EXHIBITION.....	68
*ROYAL BOTANIC GARDEN, KEW, II.....	69
*GARDEN PLANTS—THEIR GEOGRAPHY, XXX	71
PREPARING OF GROUND FOR PLANTING TREES.....	73
*MONUMENTS AND PARKS OF BRUSSELS	74
PARK NOTES.....	76
CEMETERY NOTES.....	77
CORRESPONDENCE	78
PUBLISHER'S DEPARTMENT.....	79

*Illustrated.

THE completed program for the meeting of the Park and Out-Door Art Association, Minneapolis, Minn., June 22-24, inclusive, is just to hand. It does not differ materially from the preliminary announcement given in our May issue, but it certainly emphasizes the breadth of the field covered by the title of the association, and to a still greater degree its relation to the higher necessities of our civilization both as regards the community and the home. This meeting will bring together the foremost landscape architect-gardeners in the country, which fact will give the discussions an authoritative importance, and the suggestions involved, a practical value with far reaching influence. Minneapolis has always been noted for the activity in good works of its women, and it is not surprising therefore to find a most important section, occupying an evening, devoted to the school, the home and the children, under the charge of the ladies. That out-door art should now be acknow-

ledged to exercise so important an influence on child-life manifestly suggests valuable results for the work of the association on the next generation as well as this. The beneficent results which are promised inspire the fervent hope that no effort may be spared to impress upon the public the great importance of an understanding of the value of outdoor improvements, so as to arouse an active interest in helping to carry into effect the well digested reforms suggested from time to time.

AMONG the first acts of the new Art Commission of New York City is to informally recommend Mount Tom, overlooking Riverside Park, as the site for the Soldiers' and Sailors' Memorial. This old landmark is a great mass of rock, situated about two miles south of the Grant Monument, and on which the quarrymen's eyes have often been set with great longing. Properly treated it will be a commanding site, and it is to be expected that a design will be forthcoming that will be appropriate, dignified and artistic, befitting the cause and the location. The question of site for the New York soldiers' monument has been a subject of quite acrimonious controversy, not by any means in the spirit with which such a public matter should be considered. But it has had a most beneficial effect on the public sentiment. It has displayed the weakness of some functions in which the people have been wont to place implicit confidence; it has shown how blind personal interests may make otherwise public spirited men, and public officials, with axes to grind. It has clearly demonstrated the necessity of placing all undertakings of the nature of artistic embellishment of a city in the hands of men trained in art, free from the "insolence of office," and whose lives have been spent in the study and practice of art, and who if they should err at all in judgment, will ere from excess of zeal in the cause and not from the prospective "material" that is in it.

THE exhibition of sculpture by the National Sculpture Society, just closed in New York City, marks a decided stride in the development of sculptural art in this country, and strongly emphasizes the vigor underlying untrammeled genius when time is ripe or opportunities offer for the unfolding. Of the exhibitions previously held by

the society, each of which denoted a rapid progress, this last in importance and in the clearly defined impressions it conveyed that the end sought by its promoters was being realized, was strikingly in advance of all. It has been considered the success of the year in New York City. The idea in the exhibition generally, and in its arrangement, was to present to the people "sculpture in modern times and for modern uses," and this was shown by a large sculptural hall, a conservatory with small fountain, a memorial room, a room for the collections of medals, ivories, etc., and an Italian garden giving out-of-door sculpture. This arrangement taking it for granted that the best judgment was displayed in the disposal of the objects accepted for exhibition, immediately suggests the broad lines upon which the effort was founded, and the seriousness with which the society considered the question of the development of sculpture in this country. In another column a more detailed description will be found, and this will still further lead to a realization of the points touched upon above. The interest in the affair may be inferred from the fact that there were ninety-three exhibitors and two hundred and fifty-four exhibits, a worthy display of good sculpture for any clime or any period. The work of the National Sculpture Society cannot be too highly endorsed. It was organized for a purpose and has stood for that purpose, as this third exhibition asserts. It has made sculpture in the United States to stand alone, without the aid of its sister arts, and it is, all things considered, establishing sculpture in the minds of the people as an art that can be as readily adapted to the schemes of home as well as municipal decoration, provided opportunities for its use are as practically offered as in other lines of decorative embellishment. We have said that the society was founded on broad lines, and so it was; but it was not intended by that to mean that good, bad or indifferent work or intentions in the way of so-called sculpture could all be included within its bounds. Its object was to build up American sculptural art, and to do this there were poor principles and mediocre art to be discouraged and turned down, and effort towards good work and high principle encouraged. To this end the education of the people to the appreciation of really artistic work has been, perhaps, the most important function of the society. That, in conjunction with allied efforts, it is succeeding in this direction is beyond doubt. All the recent controversies in relation to public monuments, the final resignation in many cases to the dictum of the artists, the increasing importance of sculpture exhibitions and the works exhibited, go to show unmistakably the trend of the times. Happily for both sculptor and

people the field is the broadest in the world; we are only in the very infancy of municipal adornment; we are only in the infancy of large cities for the matter of that; but it augurs well for this great and favored country that, so comparatively early in its development, we can have an exhibition of sculpture of such a character in its artistic excellence, and so broad in its field, as to reach from the forum to the home in its beautiful creations for their adornment. And its significance is prophetic of the quality of our higher civilization as the years progress.

A MODEL PLAYGROUND.

The equipment of a model playground is somewhat as follows: In the middle is an open circular area, to be flooded in the skating season and used as a playground during the rest of the year. This is surrounded by a bicycle track fenced for safety. Outside of this are various means of enjoyment, such as tennis courts, swings, parallel bars, swinging rings, sand piles, music stands, *et cetera*. All is surrounded by a promenade path, where mothers may wheel baby carriages, and where rows of seats invite the visitor to rest under overhanging shade trees. Each of two sides of the playground have a pavilion, one for boys, the other for the girls. These were intended to take the place of the playground in winter and during stormy weather, but certain changes will be necessary before they will fully answer the purpose. But what really counts is the use made of the playground, and the supervising care is to be intrusted to playground leaders. These teachers are to study the nature of the child and to so conduct the play as to guide the children and not unnecessarily restrain them. New games are to be invented, old ones revived, foreign ones introduced, and all necessary modifications made to answer the natural and growing taste of the youth. A thorough co-operation with the home, the school and the church is to be had for achieving the highest ends. The parents and the teachers in the neighborhood are to direct the children to the playgrounds after school hours, and not let them drift into the streets as they do now. From the churches in the locality many are expected to come who will assist the teachers in playing with the children and exert their good influence upon them. Thus the playground would become the center of delight, and of moral and social culture in the neighborhood.

Such a playground is not merely a creation of the imagination. Several have been established in American cities with most excellent results, and many more will follow this summer.—From "Children's Playgrounds," by Stoyan Vasil Tsanoff, in *Municipal Affairs* for June.

HORTICULTURAL NOTES.

Prof. Samuel B. Green, Horticulturist of the University of Minnesota Agricultural Experiment Station, St. Anthony Park, Minn., sends us the following interesting notes:

Recently I made a present of quite a bunch of trees to Como Park, Minneapolis, which by the way is getting to be one of the prettiest parks in this country, and in talking with the foreman I learned that they had been unsuccessful in growing Tamarisks, but soon found that they had only the forms commonly known in our nurseries, none of which are adapted to this section. Such forms as *T. Africana* and *T. Chinensis* grow pretty well for the first year when received in good condition, and after that time continue to grow less and less until finally they drop out altogether, and they are never satisfactory here, while the form known as *T. Amurensis*, while not perfectly hardy, yet is very satisfactory, and makes a strong growth each year. I have seen this Tamarisk growing thrifitly, I think even better than it does here at St. Paul, at Brookings, S. D., on very dry land, where it forms a plant seven or eight feet high. It is so graceful and pretty, and so easy to grow withal that it seems to me it ought to be more generally used in park planting. The larger Caraganas often look very pretty at this season of the year when the leaves are just unfolding, and the yellow flowers begin to show.

The form that we have here came to us in some of our Russian importations, and is proving very desirable. It makes a bushy or tree-like plant eight to twelve feet high in this section.

I have found that the *T. Amurensis* is most easily grown from cuttings of the hard wood set in the ground in autumn, and covered with earth during the winter, when it often makes a growth of four feet the first year.

Rubus deliciosus is a Rocky Mountain raspberry that has leaves very much resembling those of the currant, and white flowers fully as large as those of *Rosa blanda*, which appear about two weeks earlier in the season. Planted in groups in sheltered locations they would make a very attractive spot on the lawn of a park or cemetery. I am much pleased with it since it seems perfectly hardy and at home here.

THE PÆONIA.

With us the Pæonia is now waning in glory and soon the clump will look ragged and mar the landscape. Yet we read from the pen of one of our leading landscape architects, directions for planting a flower garden and find the pæonia placed in large clumps by themselves, as though their beauty in May would offset their ragged, sunburnt leaves during the remainder of the season. May I suggest

the planting of Desmodium in variety as a means of transforming these pæonia beds into a picture of beauty, instead of allowing them to remain a blot on the surroundings.

I have planted Desmodium and Pæonias alternately, and as each die down to the ground in the fall and come up in the spring, they grow well together.

When the Pæonia is up and through blooming the Desmodium is ready to take its place, and hide the objectionable features of the former with a beautiful foliage that changes color with every passing breeze, like the waves on a body of water; the wind changes the light green foliage by turning the leaf, showing the underside a silvery green, and in large clumps of Desmodium it is a beautiful sight to watch the gentle zephyrs playing on the foliage, reminding one of the waves on the water. Then when the season is almost ended the once beautiful Pæonia bed is transformed, and the delicate red, pink and white pea shaped blossoms of the Desmodium burst forth in all their glory. What would have been a blot in the landscape is once more an ornament.

Sid. J. Hare.

POISON IVY.

Since no other poisonous plant is so widely disseminated or so universally dreaded, the wonder is that mistakes are so frequently made regarding its identity; for through fear of it our most harmless and beautiful vines are often shunned.

It frequents fence rows, rocks and thickets, is 1 to 3 feet high, with ovate leaves, dark green and shining above, rather downy beneath, and variously notched, cut-lobed, or in one variety, *Rhus radicans*, entire; the latter is a woody vine, often ascending trees to a height of 40 or 50 feet by means of its thread-like rootlets. The small greenish flowers are in axillary panicles.

It is perhaps most frequently confused with the Virginia Creeper, so popular for shading verandas. A simple rule to remember is, that the leaves of the harmless vine are grouped in fives, and the berries are dark blue; those of the poison one are in threes, and the berries are nearly white.

While the leaves doubtless contain the most active toxic element, neither stems nor roots are free from it—even in mid-winter. Owing to the volatile nature of the poison, sensitive persons are often affected by merely passing on its leeward side. This quality also renders the destruction of the plant by burning dangerous.

Those who have freely handled it many times without ill effects are liable at some time,—owing to difference in external or physical conditions,—to succumb to its venomous breath; and if once poisoned, they are ever after easily affected.

The trouble is usually manifested in a few hours after exposure by a severe itching, followed by an eruption of an erysipelous nature. Excepting in the most severe cases a wash of soda and water applied frequently until the trouble disappears will suffice. If this is used freely soon after contact the eruption may often be prevented. Copperas water is also an excellent remedy. Iodine kills the poison almost immediately. It has been recently stated on good authority that hot water is an effectual remedy.

The eruption is communicable by direct contact, hence one affected even slightly with it should use a separate towel. *Bessie L. Putman.*

RESIDENCE STREETS.—X.

CARE.

After a street is completed, that is, after all the underground improvements are in, the sidewalks built, the pavement constructed, and all the planting and seeding done, the result will not be as satisfactory as it ought to be unless continual care is given. This care need not be very expensive, but someone ought to feel responsible for the appearance of the street as a whole and especially for the welfare of new plantings.

The most important thing with regard to trees and shrubs that have just been set out is to keep the surface of the ground about them loose with a rake or hoe, so as to retain the moisture in the ground by preventing evaporation. Aside from shortening in the smallest branches when the planting is done, very little trimming will be needed for several years. For immediate effect, the trees may be planted closer together than they should stand when reaching maturity. When such is the case, the trees to be removed should be taken out before their branches touch those of adjacent trees. It is not necessary, however, that each tree should



FIG. 18. Showing how decay follows removal of large branches, and how energy has been wasted in trimming.

stand by itself. Often a group of two or three may be placed not more than five or six feet apart, and remain so as long as they live, the tops forming practically one mass of limbs and foliage. The appearance of the street will be better if there are some open spaces left. A group of trees should be separated from the next group, or tree, even in old age. The trees will be more beautiful if no trimming at all is done after they become established in their new homes so that they grow with vigor, but we must not forget that the street is for use, and so those branches which interfere with carriages or umbrellas should be removed. They should be cut next to the trunk or larger branch from which they spring so that the scar will heal over.

Two mistakes are often made in trimming trees. One is in trimming up, the branches often being removed until the trees resemble brooms, the long scarred trunks holding only a tuft of foliage at the top. The other is trimming down, the tops being cut away until we see only trunks supporting mere stumps of branches. When either mistake has been made, the tree can never again present that graceful appearance that we see in a tree which has



FIG. 17. Incorrect method of trimming trees.



FIG. 19. Showing effect of such trimming as is illustrated in Figures 17 and 18. After seven years of additional growth note how decay has set in so that branches are easily broken.

grown naturally. Not only is the appearance injured, but usually the health of the tree is destroyed, the scars left by sawing off the branches giving access to fungi which eventually cause the decay of the trunk. All dead branches should, of course, be removed. These may, from time to time, be found even in healthy, vigorous trees, being either broken by the wind or smothered by the stronger growth of neighboring branches. It is true that



FIG. 20. Untrimmed trees of the same species as shown in figures 18 and 19.

the vigor of a tree may sometimes be renewed by shortening the branches, but this should only be done with the greatest care.

The shrubs, as well as the trees, will sometime send out branches that interfere with the progress of travellers. These should usually be cut off near the ground, so that the shrub as a whole will preserve that even, gradual taper of the branches which helps to make them attractive in winter. Shrubs which are planted for the color of their branches, may be kept bright by cutting away from time to time the old growths that have become gray or brown.

The raking or hoeing so necessary at first, will



FIG. 21. Untrimmed Trees. Compare with Figures 17, 18, 19. become less and less necessary as the trees and shrubs acquire a firm hold on the soil, and cast a deeper shade on the space occupied by their roots.

O. C. Simonds.

On the Riviera, Italy, one occasionally sees small, stunted plants of prickly pears; but in the Barbary states, and more particularly in Tunis, the prickly pear grows to a tremendous size, and to such a thickness that hedges of it form an impassable barrier to human beings and large animals. The reckless person who tries to force a way through will soon repent his temerity, as the long prickles on the leaves will speedily manage to insinuate themselves into his skin, and the wounds they make are peculiarly painful. This plant, which people call sometimes the Barbary fig, and sometimes the cactus, is not of African origin, for the Spaniards brought it over from America and planted it in Morocco, whence it spread to Algeria and Tunis. It prefers a stony or rocky ground and will grow in the most barren places. The Arab finds in it food, drink and also fodder for his cattle and camels.

LEGAL.

CEMETERY COMPANIES CAN BE SUED FOR NEGLIGENCE.

The important question was raised in the recent case of Long against the Rosedale Cemetery, as to whether an incorporated cemetery company could be sued for damages alleged to have been caused by the negligence of its managers and servants. That corporations are liable for the wrongful acts of their servants, committed while in the discharge of their duties, cannot, as a general proposition, be denied. And the United States circuit court holds that a cemetery company incorporated under the general laws of the state of New Jersey relating to cemetery companies, and entitled to the immunities of that act, but not shown to enjoy any special privileges granted under special charter, may be sued for the negligent conduct of its managers and servants. It says that it may be that this company, like many another party sued, has not the means from which an execution may be satisfied in the manner provided by law, but that inability to respond is not a bar to the recovery of a judgment. And it lays special emphasis, in this case, upon the fact that the New Jersey legislature has provided a way by which judgments against cemetery companies may be satisfied from rents, issues, profits, incomes and revenues derived from lands, etc., which, upon a proper application, the court would place in the hands of a receiver for the purpose of satisfying a judgment. Surely, it declares, the law is not brought into contempt by permitting judgment to be entered against a cemetery company, when there is a possible means by which it may be satisfied. Moreover, the contention, that the company is a charitable organization, and, as such, relieved from responsibility for the wrongful acts of its servants, the court dismisses because it had not at hand any means by which it could determine that its purpose is not to make profit, which is the test to be adopted to determine whether an enterprise is charitable or not. And it denies that "consideration of decency, and pious reverence for the dead," should prevent such an action being maintained. It says that the lands of the company, surrounding the lots appropriated for the burial of the dead, are by the law exempt from sale under execution, to indiscriminate purchasers, for purposes foreign and repugnant to the purpose to which the whole plot has been dedicated; but the same law points out the way by which, without doing violence to these natural feelings, certain profits and revenues of cemetery companies may be applied to the payment of any judgment which may be recovered against them.

NOTES.

It is said that 4,200 species of plants are gathered and used for commercial purposes in Europe. Of these 420 have a perfume that is pleasing and enter largely into the manufacture of scents and soaps.

* * *

Last year the output of rubber from Mexico was 1,000,000 pounds. Hundreds of thousands of rubber trees are being planted and in a few years most of our supply of rubber will come from that country, instead of South America and elsewhere.

* * *

The Philippine islands are very rich in forests and contain many valuable woods, many of which are practically unknown. There are said to be thirty-two tinctorial woods. Among the valuable ones is the ebony, and the magkano is said to be absolutely indestructible by rot. The forests generally remain intact in the interior, except for Luzon, where they have been extensively thinned out.

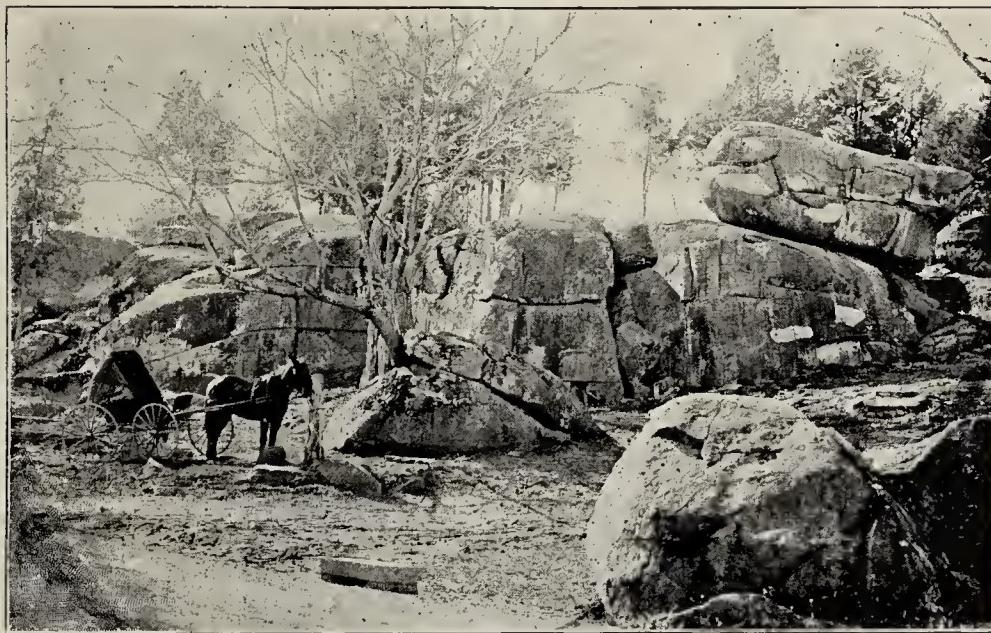
* * *

M. Serge Belaguine, a Russian explorer of Brazil, states in an interview recently published in the *Gaulois* that a few degrees below the equator he discovered a forest of flowers that prevented him from approaching them. With every deference to M. Belaguine, that forest seems to have been discovered before. Two years ago there appeared in a San Francisco paper an account provided by a bulb hunter returning from the same region, who declared that after noticing in a forest an odor, vague and sweet at first, but which increased as he advanced, ultimately he reached a clearing, and there, straight ahead, was a wilderness of orchids. Trees were loaded with them, they trailed on the ground in beckoning contortions, dangled from branches, fell in sheets and elongated and expanded as far as the eye could reach. A breeze passed and they swayed with it, moving with a life of their own, dancing in the glare of the equatorial sun, and as they danced, exhaling an odor that protected them more sheerly than a wall. In vain did that hunter endeavor to approach. There was a veil of perfumed chloroform through which he could see, but through which, try as he might, he could not pass. It held him back more effectually than bayonets, and it was torture to him to see those flowers and to feel that before he could reach them he must die, suffocated by the very splendors of which he was in search, poisoned by floral jewels such as no one perhaps had seen before. At the time the place was known as the village of demon flowers.—*Collier's Weekly*.

DEVIL'S DEN, GETTYSBURG.

The portion of the battlefield known as the Devils Den is well worthy a visit, aside from any connection with the great battle that raged about it. One comes on it on the way from Little Round Top to the more advanced lines of battle on the Union left.

As its name suggests, it is a wierd place. The huge boulders are piled one on the other, as seen in the illustration, and between and under them are



DEVILS DEN, GETTYSBURG.

vacancies in numbers and of large size. Perhaps the most interesting sight is on the other side of the road shown in the picture. There is what is almost a subterranean creek, hidden nearly from view by boulders like those the illustration shows, one boulder on the top of the other. Sometimes a huge rock will have gathered a considerable amount of soil on its top and in this soil and in the soil by the side of these rocks vegetation has gained a foothold, and thrives so nicely that when at some distance away the scene is like a small woods.

It takes no little agility to get from rock to rock, but to one who loves trees and flowers as I do, the sight of so many beauties just beyond reach is always a temptation to venture something to obtain them.

In this den there must have been as many as thirty or more perennials and small shrubs. As of interest to many of your readers, I will name a few of them. *Echium vulgare*, *Oenothera fruticosa*, *Verbena urticæfolia*, *Pycnanthemum linifolium*, *Ceanothus Americanus*, *Helianthemum Canadense*, *Asclepias rubra*, *Scutellaria integrifolia*, *Rhus copallina*, *Spiraea opulifolia*, *Pentstemon pubescens*, *Phlox subulata*, *Phlox pilosa*, *Rosa lucida*, *Heuchera Canadensis*, *Anemone Pennsylvanica*, *Senecio aurea*, *Lobelia spicata*, *Corydalis glauca*, *Cyno-*

glossum Virginicum and many other things. Red cedars, butternut, Judas tree and various oaks abound. Formerly a fine large Judas tree grew along side one of the boulders shown in the picture, but it had disappeared when I visited the place last year.

If any recollection of the battle is correct, there was not the terrific fighting about this, the Devils Den, than many other portions of the field saw. It was between the points which saw the fiercest charges.

The confederates occupied it awhile when charging Little Round Top, and our own troops had it later in the day. And after the repulse of the confederates, their dead were thickly strewn about this portion of the field; and here it was that many of our own mortally wounded at last gave up their lives. It is not far from the Den, a little to the left of it, near the base of the Little Round Top, that the combatants met in hand to hand conflict, and where, on the next day, it was impossible to walk for the dead piled one on the other. But in the vicinity of the Den to-day nothing indicates a strife at any time.

"The neighing troop, the flashing blade,
"The bugle's stirring blast;
"The charge, the dreadful cannonade,
"The din and shout are past;
"Nor war's wild note, nor glory's peal,
"Shall thrill with fierce delight
"Those breasts that never more may feel
"The rapture of the fight."

Though boulders strew all the fields about Gettysburg, there is no part of the battlefield like the Devil's Den, and visitors to Gettysburg should not fail to see it.

Joseph Meehan.

Getting Rid of Ants.

C. H. Fernald, of the Massachusetts Experiment Station, recommends the following which is a good and sure method: Make holes with a crowbar or convenient stick from 6 in. to 1 ft. deep and about 15 in. apart, over the hill or portion of the lawn infested by the ants and into each hole pour two or three teaspoonfuls of bisulphide of carbon, stamping the dirt into the hole as soon as the liquid is poured into it. The bisulphide of carbon at once vaporizes and, permeating the ground, destroys the ants but does not injure the grass. One should remember while using this substance that it is highly inflammable and no flame, not even a lighted cigar should be brought near it.

THE NATIONAL SCULPTURE SOCIETY EXHIBITION.

No more beautiful exhibition of the National Sculpture Society which closed on May 21st, has ever been given in this country. The unusual amount of excellent monumental work which has been called forth in the last two years for the decoration of the Library of Congress, made possible a more representative display than could be collected for the first exhibition of the society. And we remember that that first exhibition was successful enough and convincing enough to constitute an era in our decorative art.

As in the first exhibition, the third emphasized once more the interdependence of sculpture and foliage, and too much cannot be said in praise of the architectural arrangement, the placing and grouping of the statuary, and the floral and terra cotta decorations. Instead of the general plan of an Italian garden, so well carried out in the first exposition, an added character and an architectural construction were given to the three principal rooms by arranging the first as a bronze and white sculpture gallery which showed how our Metropolitan Museum collection might be arranged, but is not. The second was a conservatory, something after the manner of the peristyle of a Pompeian house with vines hanging from the trellis overhead, and a low fountain by MacMonnies in the centre, which did not obstruct the view from the sculpture room to the farther wall of the Italian garden where Mr. French's monument to John Boyle O'Reilly stood against a bank of cedars. The small gallery at the right of the conservatory was the memorial gallery in which was placed the recumbent portrait statue for a tomb by Frank Duvenick, Paul Bartlett's bronze door for the Clarke mausoleum, the marble panel, "Imagination" by Olin L. Warner, as well as a bronze statuette of the Diana which Mr. Warner exhibited two years ago, and which was considered by many critics the most beautiful piece of

sculpture in that exhibition. Rich leathers covered the walls and furnished a warm back ground for the marble and bronze, but the collection of exquisite bronzes by Mr. Warner which have been cast to be presented to the Metropolitan Museum by the Sculpture Society, emphasized only too clearly all that American art has lost in the untimely death of one of its greatest men.

The "collectors' gallery" on the left of the conservatory contained a very interesting collection of portrait medallions and medals, Japanese ivories and reproductions of antique bronzes. Here also were the large and very elaborate andirons for Mr. Vanderbilt's southern home "Biltmore," designed by Karl Bitter. The west wall of the garden was

lost behind a broad cascade of water which plashed from step to step, flanked by hydrangeas in terra cotta vases. The base was a moss bordered fountain in which real turtles moved comfortably and took a lazy interest in the thoroughly charmed visitors who stopped at the foot of the terrace. The upper terrace was decorated with flowering plants among which J. Q. A. Ward's



THE CASCADE—ITALIAN GARDEN.

(Illustration from Copyright photograph, by courtesy of the National Sculpture Society.)

"student" reclined—a splendid piece of sculpture for the decoration of the Garfield monument in Washington. From the opposite end of the garden Mr. Ward's "Indian Hunter" sprang forward. This is intended to mark the site of the home of James Fennimore Cooper at Cooperstown, N. Y., and which is already well-known to those who are familiar with and appreciate the few really good things sculptural to be found in Central Park.

Among other charming things is the little figure of an angel by Mr. French—a fragment from the Chapin Memorial at Milwaukee, and a portrait relief by Mr. Augustus Lukeman from a monument in Greenwood cemetery. There is something Greek in the expression of peace which the seated figure conveys, rather than the modern sentiment of grief from which the ancients seemed so happily free.—M. T.

**ROYAL BOTANIC GARDENS, KEW, SURREY,
ENGLAND, II.**

To be more lucid, it may be well to trace each of these estates separately.

RICHMOND GARDENS:—The “Old Manor House” at Sheen, was made a Royal Palace by Edward I. After destruction by fire, it was rebuilt and named “Richmond” by Henry VII, who died there in 1507, as did also Queen Elizabeth in 1603. It was sold in 1650. The “Old Park” extended to the north of the Palace and its gardens correspond to the western half of the present gardens. The Richmond Gardens property was granted to the Duke of Ormond by King William III, as a reward for military services. On the Duke’s attainder, it devolved to the Crown (King George I) who in turn confirmed it to Queen Caroline. The latter was an earnest lover of gardening and lavished enormous sums of money on her gardens. Queen Caroline died in 1737 and King George II in 1760. Richmond Gardens were extended during Queen Caroline’s time and eventually absorbed land and buildings almost to Brentford Ferry. They had a great popularity long before Kew Gardens scarcely had a reputation.

KEW GARDENS:—The eastern half of the Royal Gardens, as they now are, was virtually the grounds of Kew House, and the Gardens of this domain are the ones that were exclusively known as Kew Gardens. In the Richmond Public Library hangs a sectional map of the vicinity of London designed by Jean Rocque in 1741-5 clearly depicting the two distinct domains, separated by Love Lane—a bridle path, which was eventually closed in 1802 by the original wish of George III.

Kew House was the property of Richard Bennett, Esq., in the middle of the seventeenth century. His daughter married Sir Henry, later Lord Capel of Tewkesbury, one of the most distinguished horticulturalists during the reign of Charles II. His wife survived him, died in 1721, and Kew House was subsequently occupied by Mr. Molyneaux, who married the grand niece of Lord Capel, Lady Elizabeth. Frederick, Prince of Wales, obtained a long lease of Kew House from the Capel family in 1730.

The Prince died in 1751, but his wife survived him and continued to reside at Kew. She died in 1772. By purchase, Kew House and domain, came into the hands of George III, and it was he who gave impetus and support to the botanical side of the Garden’s development.

In 1768, Sir John Hill published “*Hortus Kewensis*” a catalogue of the plants cultivated in the garden of H. R. H., the Dowager Princess of Wales at Kew, an octavo volume of 458 pages.

Wm. Aiton, generally spoken of as the “elder” Aiton, was engaged in 1759, by the Dowager Princess to establish a “Physick-Garden.” John Haverfield was chief gardener under Aiton, and was transferred to the Richmond Gardens in 1760, on the death of George II. In 1784, Haverfield died and Aiton then directed both gardens. Kew House was taken down in 1803 and a Sun

dial marks the location of one of its rooms, used as an observatory. John Stuart, third Earl of Bute, was an enthusiastic botanist. He was Lord of the BedChamber, to the Prince of Wales, son of George III. In 1761 his office was Secretary of State, and in 1762 and 1763, Prime Minister. Lord Bute assiduously developed the scientific phase of Kew while Aiton cared for the garden in a practical sense. In 1761, the “Great Stove” was erected [this is now obliterated], a structure 110 feet long and said to have been, at that time the largest hot-house in England.

In 1762, “all the Duke of Argyles trees and shrubs were removed (from his seat at Whitton, near Hounslow) to the Princess of Wales’ Garden at Kew, which now excels all others, under the direction of Lord Bute.”

Sir William Chambers was architect of Somerset House, and in 1763 published at the expense of Princess

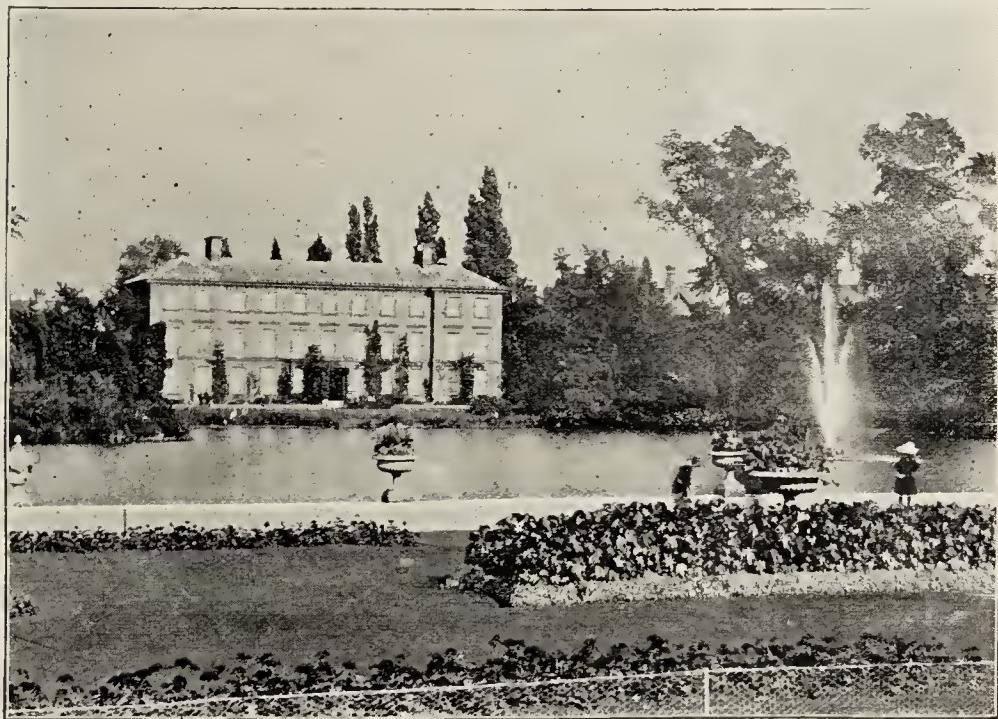


FIG. 1.—Museum No. 1, Across the Pond near the Palm House.

Augusta the work, “*Plans, Elevations, Sections and Perspective Views, of the Gardens and Buildings at Kew, in Surrey, the seat of H. R. H. the Princess Dowager of Wales.*” Sir William travelled to China in his youth, and amid the subsequent orgies in any new idea in landscape gardening, opportunely launched his views in a work entitled “*Desertations on Oriental Gardening.*” He planned the Pagoda, a brown brick structure 163 feet high, octagonal in shape with a base diameter of 49 feet, that was built in 1761-2; “Orangery” built in 1761 and now known as Museum No. 3, “Ruined Arch,” built in 1759 and still remaining in part, over one of the main walks; Temples of the Sun, Arethusa and Bellona. These are a few of the remaining structures, illustrating the capricious ideas he propagated.

George London and Henry Wise were nurserymen at Brompton in the latter part of the 17th century. They were made Royal Gardeners and were religious adherents to a formal style of Landscape Gardening. (Stephen Switzer, was a pupil of theirs, but initiated a slight departure from their geometrical garden designs towards a more natural type.)

Bridgeman succeeded London and Wise in the

charge of the various Royal Gardens. At this period landscape gardening was undergoing an organic change; Addison wrote convincingly, on the demerits of formal gardening and Pope of Twickenham delivers himself of satirical complaint in opposition to the regular style. Their writings influenced Switzer but to a greater extent Bridgeman, a contemporary of Switzer. It was in Richmond Gardens that Bridgeman introduced forest scenes and cultivated fields. It was that same Bridgeman, who at Stow, Lord Cobham's residence in Buckinghamshire, ventured to sink the boundary fence, which was then dubbed the "Ha Ha," for the purpose of introducing the surrounding country beyond the confines of the particular estate into his vistas. The "Ha Ha" was introduced into Kew also.

While the individual beauty of the gardens was being developed, its scientific influence was looked after with particular zeal. In 1772, King George III, on recommendation of Sir John Pringle, President of the Royal Society, sanctioned the sending of Francis Masson, one of the Kew gardeners, to the Cape of Good Hope to "collect there seeds and living plants for the Royal Botanical Garden at Kew." This was a new innovation in the policy of the garden and served to extend its prestige far and wide. Masson was a sedulous collector and during his life explored the Cape of Good Hope twice, the Canaries, Azores, Madeira, Portugal, Spain, Majorca, Minorca, Canada and the West Indies. He eventually died in Montreal, Jan. 1806, and Mr. Dryander observes that "he was the first and one of the most successful of the numerous gardeners, sent out from Kew, to collect living plants for the Garden."

During the years 1768 and 1780, Cook's expeditions were undertaken and Mr. (later Doctor) Banks and Dr. Solander were naturalists on the voyages.

Closely following Masson, other collectors were sent out, David Nelson went with Cook's third expedition; and again with Mr. Brown on the "Bounty" to the South Seas to introduce the bread fruit tree into the British West Indies.

During the life time of Princess Augusta who died in 1772, Lord Bute was botanical adviser at Kew, the important office that Dr. Banks so creditably filled after Lord Bute. Dr. Anthony Howe was employed by Sir Joseph Banks during 1787-9 to collect plants in India. We must note that Wm. Aiton died in 1793 and was succeeded by his son Wm. Townsend Aiton, usually referred to as the "younger" Aiton—in the same capacity, the latter holding his position until 1841, when he resigned.

Continuing the list of botanical explorations, we find Archibald Menzies, as Botanist and Surgeon, accompanied Captain Vancouver on the latter's survey (between 1791-95) to S. W. Australia and from there introduced numerous Proteaceæ. Menzies, introduced Araucaria imbricata and in 1796 discovered the California Sequoia Sempervirens.

Christopher Smith went to the West Indies on Captain Bligh's second voyage. Smith's assistant, James Wiles, was later dispatched to the West Indies to grow the 300 bread fruit trees sent there.

Later on Smith was appointed Botanist to the East India Company and in its interest went to Calcutta. Peter Good, a gardener of Kew, was sent to Calcutta in 1795 to deliver to Kew the plants collected at Calcutta by Smith. Good later went as an assistant to Robert Brown, the botanist on Flinder's survey of the Australian coast. On this voyage, large collections of Pro-

teaceæ were made by Good until 1803 when he died but his collection of seeds reached Kew, nevertheless.

In 1801 George Caley was sent by Sir Joseph Banks to New South Wales in the interest of Kew. Among his introductions the *Livistona Australis* is perhaps the most notable.

In 1803 Wm. Ker, a gardener in whose honor, the genus *Kerria* was established by De Candolle, was sent to China and visited Java and the Phillipines by the way; striking among his introductions were *Lillium Japonicum* and *L. tigrinum*.

In 1810, the affliction of the Royal and loyal supporter of the garden, George III, became permanent and from thence the gardens retrograded for thirty years.

The British conquest with France endangered English commerce and thus prevented dispatching botanical pioneers from Kew but when at an end, Sir Joseph Banks revived the custom and in 1816 David Lockhart was appointed as collector to the ill-fated Congo expedition.

At this point the Herbarium demands attention. The present building containing the Herbarium was formerly known as "Hunter House," having been the property of Robert Hunter. It was probably purchased in 1818 for the King at the instigation of Sir Jos. Banks, who earnestly strove to found a herbarium and library at Kew. Banks died in 1820 and in 1823 George IV sold Hunter House to the nation, the Bankian herbarium and library having been bequeathed to the British Museum, for which it served as a foundation to the present herbarium at South Kensington.

It was in 1852 that Hunter House, later known as the "King of Hanover's House," was made an Herbarium for the present institution.

In 1820, death ended the brilliant career of ever memorable Sir Jos. Banks. With the decease of George III, in the same year, Kew practically ceased to be a royal residence.

On the demise of Sir Jos. Banks, it seems that Sir Everard Home filled the position so creditably conducted by Lord Bute and Sir Jos. Banks. Sir Everard died in 1832.

Practically a National institution, and demanding a large annual expenditure the Royal Gardens aroused a public discussion of abolition. This unrest continued in the popular mind until 1837, the death of William IV. In January 1838, a committee of which Dr. Lindley was one, and Joseph Paxton of Chatsworth fame another, was appointed to inquire into the management, etc., of the Royal Gardens. The younger Aiton was curator at the time, and John Smith—who was later created curator was a foreman. After Smith's promotion to the Curatorship, he expressed his wounded feelings caused by the injustice of the inaccurate report, one that scarcely exposed the real existing merits of the gardens. Smith had undoubtedly reason to be offended. In 1840, the report submitted by the committee in 1838, was presented to Parliament. During this interval the Lord Steward, then Lord Surrey had entire control of the gardens.

It was learned that he intended to offer the plants to the Royal Horticultural Society for their Chiswick Gardens and the Royal Botanic Society for their garden at Regents Park and then to convert the glass structures into vine and pine houses. A comment contemporary with this development is: "The council of the Horticultural Society, with a spirit highly favorable to them-

selves and to science, declined becoming a party to a proceeding inauspicious to their pursuits, and we trust that no corporate body could be found in the United Kingdom capable of deviating from the dignified course of which these gentlemen have set the example." The Botanic Society reached the same conclusion and it seems Lord Surrey then decided to destroy the plants to enable him to carry out his designs. This intention becoming publicly known, it was loudly condemned "as being a disgrace to the nation."

It appears that Alymer Bourke Lambert succeeded to the position Sir Jos. Banks held through the greater part of his life, (from his affiliation about 1772 to his death in 1820.) In view of Lambert's office and deep interest in botany, it is but natural he should pen his feelings to John Smith regarding the critical state of the gardens' affairs thus: 'Feb. 28, 1840 I am happy to tell you that Kew is quite safe. It was never meant to be otherwise; The offering of them to the Horticultural [Society] seems to have been for the want of better information on the subject by the gentleman who made the offer.'

With the lessening interest of Royalty in the Gardens' maintenance, they were gradually assuming a more public character. On March 11, 1840, the transference to the commissioners of woods and forests was declared. Sir Wm. Hooker at that time Professor of Botany in the University of Glasgow, was appointed Director of the Gardens April 1, 1841.

About the first act of Sir William, after his appointment was to report on the gardens. He at once displayed that mature learning, scientific attainment and executive ability that established a confidence in himself and the gardens perpetuity in every one. As the whole world knows, the bright prospects foretold were not only realized but far exceeded. The facilities, that necessitated centuries in which to bring together for advanced work, were perpetuated and augmented by leaps and bounds with ever increasing extent ever since.

Emil Mische.

(To be Continued.)

GARDEN PLANTS.—THEIR GEOGRAPHY, XXX.

ASTERALES.

THE VALERIANA, ASTER AND MUTISIA ALLIANCE.

This is the largest alliance among flowering plants. It has 16 tribes, 853 genera, and 10,684 species, constituting about 1-10th of the prominent plants of the globe. In some districts they almost monopolize the soil, often affecting the poorer areas, and it seems as though the thistles, sunflowers, and artemesias have a mission that has not been sufficiently recognized in Agriculture. Some of the herbaceous kinds are exceedingly rich in potash salts, and it is almost certain that several would be of great value for the seeding-down of fallows. Such plants as the "Jerusalem Artichoke" are easy to plant, and would deposit a layer of humus annually of far more value to the land than the deposits from "broom sedge" for instance, while if burnt over the layer of potash would be very considerable from a heavy growth.

The ornamental qualities of many of the species is well-known but by no means exploited. There are perennial and annual herbs in great numbers, and in the colder portions of the northern hemisphere they are the only representatives of the Alliance. Further south there are a few shrubs of from one to ten or twelve feet high, and as the tropics are approached some species become small trees of fifteen feet or upwards. Trees above that height are probably less than one per cent. of the whole, and except the Olearias, are rarely or never seen in cultivation. It is a curious fact that the alliance is represented in St. Helena and one or two other small islands of the southern hemisphere almost entirely by trees. The representation in southern Peru and in Chili is very largely by shrubs and climbers; South Africa and Australia have a representation in most of the forms, while as before mentioned, in the northern regions they are almost invariably herbaceous plants. Probably no other flowering plants are so equally distributed over the earth in one form or other, for while considerable areas may be destitute of legumes or even grasses, it is rare to find them without composites. Some of the new botanists wish these flowers regarded as the most perfect in existence. They are not single flowers, but assemblages of minute monopetalous flowers gathered together into racemes or discs, and frequently surrounded by gayly colored ray-flowers, which in the cultivated forms are often multiplied into doubleness. The tribal characters must be sought for in some exhaustive treatise on the plants of the world, but there is nothing very perfect in English. Few plants have given more trouble to botanists, and their separation into tribes has been left to specialists such as Lessing, DeCandolle, Asa Gray and Mr. Bentham who probably knew the species better than any man. I have heard his contemporaries say that he rarely failed to name an asterale on sight.

I will endeavor to include genera of all the tribes, and especially some desert plants of a shrubby character. Gardeners in the southwest may gather these together, assured that they will be giving attention to material but little known in cultivation, which, if not often ornamental, may at least "nurse" the trees for the arid regions for which a Government agricultural commission is said to be searching.

Patrinia has 9 or 10 species in Central and temperate Eastern Asia. They are yellow flowered perennials or biennials. *P. scabiosæfolia* and two or three others are in European gardens.

Nardostachys is in 2 species both Himalayan. *N. Jatamansi* is pink flowered and grown in Botanic gardens.



VALERIANA OFFICINALIS.

Valeriana is a large genus of 150 species distributed over Europe, Asia, Africa, and America. *V. edulis* is used as a food by the Digger Indians. *V. scandens* is a South Florida climber, *V. rotundiloba* is Chilian, and there are five or six other American kinds.

The most of those in gardens however are European. *V. Phu* from the Caucasus has a variegated form. Two are British; *V. officinalis* occupies very different stations and varies greatly in size.

Centranthus has 8 species mostly from Mediterranean regions, but *C. ruber* and its white variety is found in England, and thrives especially in old chalk pits and similar places on the Kentish side of the lower Thames.

Fedia cornucopiae is a monotypic annual from Mediterranean regions bearing reddish, pink or rose-lilac flowers, with several names for the different forms.

Valerianella, one species of which is known as "Cornsalad" has about 55 species natives of North America, North Africa, temperate Asia and Europe. *V. longiflora* Nuttallii is an Arkansas plant said to be worth cultivating.

Dipsacus is the type of another tribe. They are known as "teasels" and have a dozen or so of species two of which have naturalized in the United States.

Scabiosa has 110 species of annual and perennial herbs. Several of the best are in gardens, the East Indian *S. atropurpurea* in variety being one of the most familiar. The British "field scabious," *S. arvensis*, with various shades of purple and whitish flowers is a pretty plant whose blossoms turn bright green when exposed to tobacco smoke.

Morina in 8 species from Central and Western Asia, and *Cephalaria* in 26 species from Europe, Western Asia and Africa, are other genera of the tribe. *C. Tartarica* with light yellow flowers is a good species for those who desire a plant of five or six feet high, which may be planted in the centre of a round bed and surrounded by *Scabiosa Caucasia* for instance.

Calycereæ is a small tribe of three genera some of whose 20 species often ascend to great elevations on the southern Andes, and are scarcely at all known in cultivation.

Vernonia "iron weeds" have 500 species from

North and South America, tropical Asia and Australia. Some grow on the ground and attain a height of eight or ten feet. The dry ground species are commonly smaller. Four or five species are in gardens

mostly with flowers in some shade of purple.

Stokesia cyanea is a monotypic plant found from S. W. South Carolina to E. Louisiana. It is a low growing perennial with handsome blue-purple flowers in late summer. Hardy at many parts north.

Ageratum has 25 species of tropical or subtropical American perennials or annuals. A *Mexicanum* has become a cosmopolitan and pestiferous weed in the Eastern tropics, and the despair of many coffee planters. There are however many handsome dwarf and variegated forms in gardens.

Stevia has 80 or more species, all American.

Eupatorium has 560 species scattered over the tropical and temperate regions of the world; Australia however has but one species. *E. coelestinum* sold as "hardy Ageratum" is a good perennial garden plant with flowers resembling the greenhouse Ageratums. It is a Florida and Texas species, but has escaped from gardens and become wild in some parts of New Jersey.



AGERATUM MEXICANUM—DWARF VARIETY.



SCABIOSA CAUCASICA.

Mikania is a large American genus some of which are climbers bearing white flowers. *M. scandens* is known as "climbing hemp weed" in the States. In Central and South America several species become shrubby.

Liatris has 16 species all North American. Several forms occur, and most of them are handsome plants known as "blazing stars."

Garberia fruticosa is a monotypic branching broad leaved shrub of 4 or 5 feet high, found on the coast lands of South Florida.

Chrysopsis has 18 species, twelve being natives, and the rest Mexican. *C. villosa* in a dozen or more forms extends across the continent, and has found its way to European gardens.

Aplopappus sometimes spelt with an H. is in 60 species, found in North America, Mexico and the sub-tropical regions of South America. Three or four of the native kinds are yellow flowered shrubs, some of which are without ray-flowers. These species are mostly found in the dry hilly regions of the South Western states.

Acamptopappus in 2 species are low, small leaved, yellow flowered shrubs, also of the Arizonan region, and northward to Utah and Nevada.

Bigelowia has 24 species in North America and the southern Andes. *B. albida*, *pulchella*, *ceruminosa*, *graveolens* in several varieties, *Douglasii* in variety, *brachylepis*, *veneta*, *Hartwegi* and two or three others of the natives are low, viscid, scabrous, or tomentose shrubs, found in the arid regions, or sometimes extending to the Northwest. Two or three of the latter are in European gardens.

Solidago "golden rod" has 80 species of well-known natives. The cosmopolitan *S. Virgaurea* and its dwarf variety are well-known British plants, and in fact the original "golden rods," but it is to be hoped that fact will not interfere with the popularity of others as states emblems! A few are scattered over the world, but the greater number are North American.

Rhynchospermum is a monotypic plant from the Himalayas and Java, inserted here because its name is wrongly borne by a popular Apocynaceous climber.

Brachycome "Swan River daisy" has 44 species in Australia and New Zealand and one in tropical Africa. *B. iberidifolia* with blue or white flowers is a popular annual or at any rate so treated.

Trenton, N. J.

James MacPherson.

In the year 1306 a party of crusaders carried a number of rose bushes home to England from Damascus, and these flourished so well that in a short time the beautiful flowers were to be found everywhere in the country.

PREPARATION OF GROUND FOR PLANTING TREES.

In an article by Mr. J. A. Pettigrew, Sup't., of Parks, Boston, Mass., in *The Weekly Florists Review*, he discusses the important matter of preparing the ground for tree planting, he says:

The preparation of ground for planting is a matter of the first importance. If it lacks in depth of good loam the omission should be generously supplied; without good soil vigorous tree growth cannot be obtained, and large expenditures for procuring it is money well invested and in the line of strict economy in park administration.

Unsatisfactory also are results if holes are simply dug into the hard packed ground, or if the surface is merely skimmed by the plow, and the trees thrust in and left to fight as best they may with a growth of grass or weeds; give to young tree plantations the same culture a good farmer would give were the trees hills of corn; plow and subsoil at least twice during the previous fall months, and reduce the ground to a fine mellow condition.

When planting for groves or masses, plant thickly; the intended permanent trees may be planted from thirty to fifty feet apart, according to expected development, and the space between filled with other trees ten to twelve feet apart to serve as protection, from which selections can be made from time to time (as growth proceeds and overcrowding threatens) for planting elsewhere. Close planting is conducive to rapid growth from the protection each affords the other; the plantation also serves as a nursery, the profit of which will amply pay for constant never tiring culture, the only note of warning required being to thin quickly before damage is done. Close planting may be advocated even for small groupings, the protection and tilth being of great benefit to the intended permanent trees, beside the effect of mass is the sooner attained.

Much time and money has been wasted, and much disappointment incurred, by planting trees and shrubs in ground without adequate preparation, and with little subsequent care; how often in a hard baked soil holes are dug scarcely large enough to hold the roots, the trees are jammed in and left to their fate; their bark, tender from the shade of close nursery rows, exposed to the hot suns of summer and the freezing and thawing of winter, soon succumbs, and the trees at best linger out a short existence of stunted growth.

Good soil, deep plowing and constant cultivation are the essential conditions required for success in young tree plantations. Cultivation should be continued for at least two years after planting, or until the branches shade the ground, when grass may be sown or an undergrowth of suitable kind may be planted.

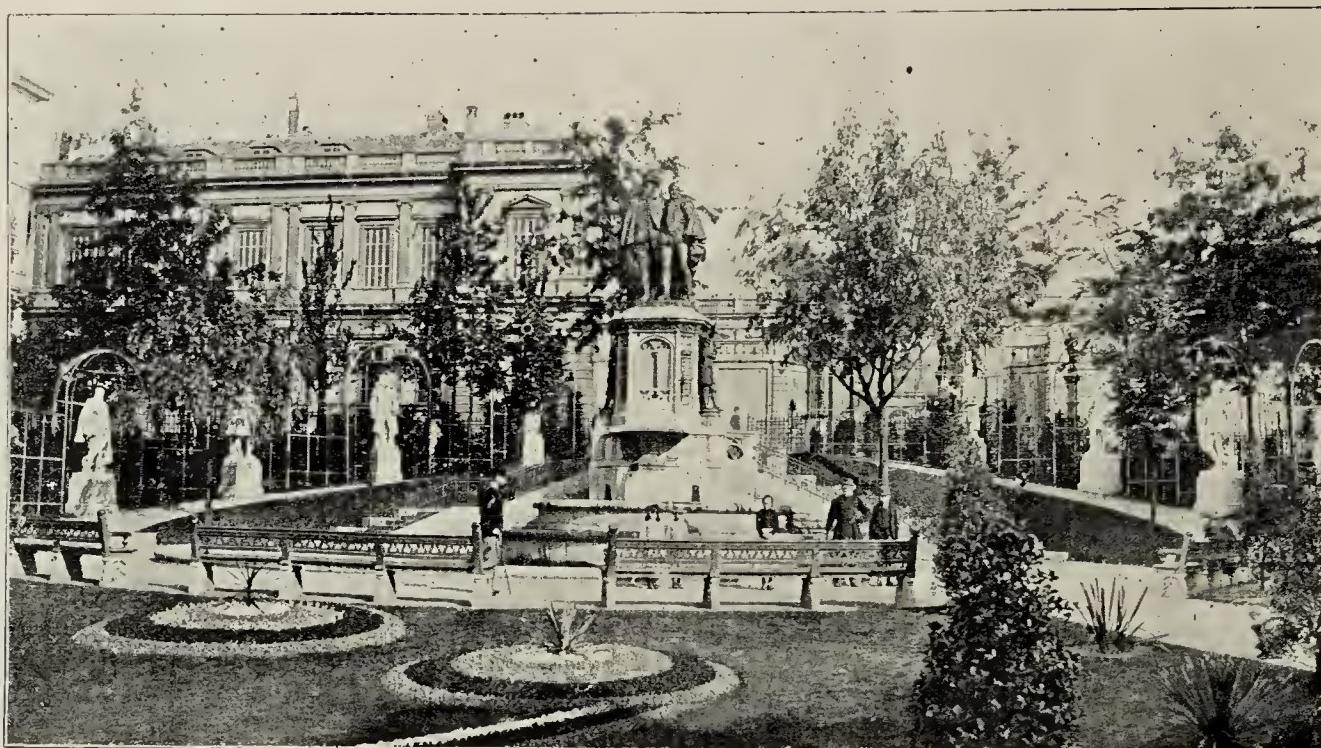
MONUMENTS AND PARKS OF BRUSSELS.

Like all old continental cities, Brussels is rich with records of its greatness, carved in stone or bronze. In the vicissitudes of the Middle Ages' strifes, many of these monuments have disappeared, leaving only written documents of their former existence; but enough treasures of the sculptural arts still exist in the public thoroughfares to make the capital of Belgium one of the most interesting places of Europe, either to the artist or the professional man.

It was founded some time in the VIIth century, but all traces of its monumental art are lost until

represents Adam and Eve driven from Paradise, and is due to the chisel of H. Verbruggen of Antwerp, who executed it in 1669 for the Jesuits of Lourain. It was given to St. Gudule church by Marie Therese in 1776.

Leaving the chronological order of description of Brussels' monuments, the principal one is perhaps the Column of Congress, begun in 1850 and unveiled in 1859 by Leopold 1st; its architect was Mr. Poelaert. This monument was erected in memory of the Revolution of 1830, consecrated by the constitution enacted by the national congress. This elegant column, of Doric style, is built of German



PETIT SABLON SQUARE, BRUSSELS.
With Groups of the Counts Egmont and Horn, and Statues in White Marble around it.

the XIIth century; in the church of the Sablon there is still a porch and an absis of the original church erected in 1288 by the Duke Jean I. In the next century, the prestige of the Communal Institutions of Brussels had become so great that it was decided to give them a temple surpassing in boldness and magnificence anything that Gothic art had created until then. Begun in 1401, the "Hotel de Ville," or City Hall, was only completed at the close of the century.

About contemporary with the City Hall is the famous Cathedral of Sainte Gudule. It is not our purpose to describe here in detail the edifices of the city, nor even the sculptural treasures which they contain, but this article would be incomplete if the pulpit was not mentioned. This pulpit, carved in oak, is not altogether in keeping with the general style of the cathedral, but its extraordinary riches of detail make it a masterpiece of the kind. It

yellow and Belgian blue stones. Its total height is 185 feet. At the four corners of the pedestal are four figures representing the fundamental liberties granted by the constitution:

The Liberty of Religion, by the sculptor Simonis; The Liberty of Association, by the sculptor Fraikin; The Liberty of Teaching, by the sculptor Joseph Geefs; The Liberty of the Press, by the same.

On the white marble tablets is engraved the text of the principal articles of the constitution and the names of the 237 members of the congress. Above the pedestal is the Genius of Belgium and the Arms of the Nine Provinces, due also to Mr. Simonis, with ornamentation of Louis Melot. The capitol, crowned by a gilt brass balustrade, supports the bronze statue of Leopold I, by Guillaume Geefs. On the Royal street side, two lions of colossal dimension, watch the entrance to the monument and are also the work of Simonis.

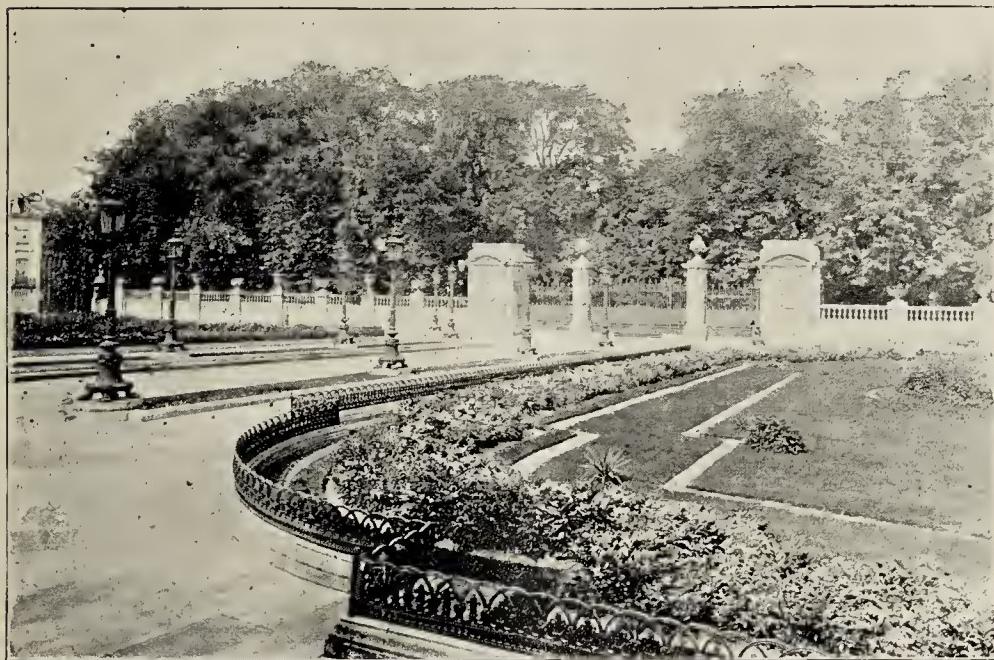
The monument of The Martyrs, also the work of the sculptor Guillaume Geefs, was inaugurated in 1838 in commemoration of the citizens who fell in 1830 while defending the nation's liberty. It is one of the most remarkable monuments of the city, composed of a subterranean vault surrounded with arcades, under which are slabs of black marble,

Knights of the Golden Fleece, whose only crime was to have refused their adhesion to the policy of persecution of the Duke d'Alva against the protestants, were executed by order of the latter June 15th, 1568. This monument is therefore a remembrance of the fight sustained in the Netherlands for liberty of conscience. Dominating a continuous flow fountain,

the group is surrounded by ten white marble statues, representing warriors and savants, such as Maurice of Nassau, Marnia of Ste. Aldegonde, Dodonee, etc.

The Auspach Monument, erected in memory of Brussels' mayor of this name, is the most modern of the city's monuments, having only been unveiled in 1897. Very happily located in the Place Brouckere, in an oblong asphalt square, bordered by granite columns supporting candelabra of artistic design, the Auspach memorial is certainly an original conception. In a basin of white marble, symmetrically relieved of its monotony by nests of flowers and foliage, rises the pedestal, on two sides of which Tritons

belt forth streams of undine crystal. On the outer rim of the basin are apocalyptic beasts, in bronze, pouring jets of water towards the center. The pedestal, of heroic dimensions and graceful lines, bear, an allegory (naked woman) of the river Senne, above which is the inscription plate. The column, is of red porphyry. The monument is rich with other figures and medallions.



ENTRANCE TO THE ROYAL PALACE, BRUSSELS.

bearing the names of the combatants who died for the country. From the center of the excavation rises a sarcophagus surmounted by a large statue of Liberty, at the feet of which lies a lion, with broken chains between his feet. Four bas-reliefs ornament the faces of the sarcophagi, representing respectively the Grateful Nation, the Consecration of the Tombs, the Fight at the Park, and the City Hall Oath. Four genii weep at the corners of the pedestal.

Of an originality which has probably no equal in Europe, is the famous Square du Sablon. The square is surrounded by an iron railing, divided by 48 blue granite columns, serving each one as pedestal to a bronze figure personifying one of the ancient "trades" of Brussels; fishmongers, tailors, slaters, bakers, etc., etc.

The whole monument, (I take the liberty to give this qualification to the ensemble,) bears the stamp of XVIth century style and is the work of Beyaert. At the end of the garden, itself a thing of beauty, is the sculptural group of the Counts d'Egmont and De Horne walking together to torture.

These two Belgian noblemen,



BOULEVARD DE WATERLOO, BRUSSELS.



PARK NOTES.

Mr. F. G. Carter, of Lebanon, N. H., will donate a fountain and erect it in the grassy triangle at the street intersection in front of his residence, provided the precinct will furnish free water. This is in line with the Art out-of doors movement, and undoubtedly there should be no question as to water supply, for the credit of the town.

* * *

The park system of Indianapolis notwithstanding the vicissitudes so far experienced is making as rapid development as might be expected, and considering that a real system was not considered until 1894, great strides have been made. The average at present is in the neighborhood of 800, and there are ten parks and squares under the care of the park commissioners. Last year there was expended on the system \$47,439.50, but there is a great need of shelter and other buildings. The plant department is supplied by greenhouses, located in Garfield Park, but until recently most of the decorative material has comprised foliage plants, from which however many attractive displays were created, and the result is that public interest in such matters is growing apace.

* * *

It is very gratifying to note that village improvement societies are being organized everywhere, indeed this spring has witnessed more effort in this direction than we have ever before noticed. Prosperity, notwithstanding the war fever, is apparently looming up, and with it the intelligence of the people awakens to a contemplation of its surroundings. Comfort and happiness actually need constantly improving conditions in this growing era, and there is nothing more conducive to such a state than that the proverbial vine and fig-tree should be in a healthy condition. This may be interpreted to mean that the village and dooryard both should display intelligent care in their improvement, and that this improvement should be carried on on lines, which, while conveying the restful influences of beauty, also uplift and invigorate the intelligence of the community.

* * *

Battery Park, Burlington, Vt., has at last been the subject of attention which will accentuate its historic associations. It also commands beautiful lake and mountain scenery. At each entrance to the park masonry pillars have been erected surmounted by a pyramid of cannon balls, which were donated by the government, to carry out the military idea. The main entrance has been widened and will be improved by the city, and all the entrances will be flanked by shrubbery arranged by a competent landscape gardener. The grounds will be carefully looked over, old trees removed, new ones cared for, and a general clearing up perfected. It is the intention of the Society of the Sons of the Revolution to erect a handsome flag-pole, and the Green Mountain Chapter of the Daughters of the Revolution to place a bronze tablet to set forth the various facts of historic interest regarding the Battery. There appears to be a very active interest in promoting the improvement of this very interesting spot.

* * *

Among many Village Improvement societies lately organized is that of Hyannis, Mass. It is called the Hyannis Village Improvement Association and has for its objects: "To improve and ornament the streets, ways and public grounds of Hyannis and vicinity, by planting and caring for trees, cleaning and repairing sidewalks, and doing such other acts as shall tend to beautify and adorn said streets, ways and grounds, and encourage conditions favorable to the public health." Any person over

fourteen years of age who shall annually plant and protect a tree under the direction of the Executive committee, or pay the amount of 25 cents annually, in money or labor, shall be a member of the association. The payment of four dollars annually for three years, or of ten dollars in one sum, shall constitute a person a life member. The success of village improvement societies in Massachusetts augurs well for the new ones. There is ample suggestiveness in the above to justify effort anywhere to organize such benevolent associations.

* * *

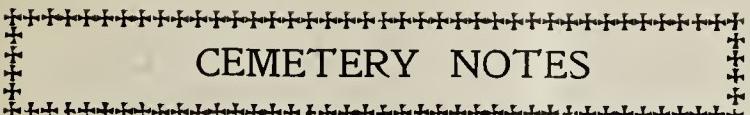
The fountains of Paris are among the most interesting features of that beautiful city, and the authorities are careful to increase their attractiveness whenever an opportunity arises. An experiment has been tried by which the waters will become luminous. It was not contemplated to have the variety of colors which are displayed from time to time by fountains in the grounds of international exhibitions, and which are manipulated by the aid of apparatus placed at a height. In Paris a sort of golden yellow will alone be employed; but the waters will assume the appearance of cascades of diamonds and topazes. According to the architect, the effect will be attained by means of electric lights and colored glasses placed around the basin in such a way that the beauty of the fountain will not be diminished when seen by daylight. The fountains which were selected for trials were those in the Place Theatre Francais and the Place de la Concorde, and up to the present the anticipations of the municipal engineers are satisfactorily realized.

* * *

The 30th annual report of the Commissioners of Lincoln Park, Chicago, for year ending March 31, 1898, is practically but a record of maintenance as funds were inadequate for extensions or improvements, or even for important repairs, notwithstanding an expenditure of \$140,180.04. There was expended on park improvement \$7,062.03. The boulevards consumed for maintenance \$9,721.14 and for construction \$67,248.97. According to the commissioners report, three important matters are urgently demanding expenditures: Buildings for increasing zoological collection, repairs of main drives and renewal of lawns. The latter is an exceptional case. The Lincoln Park lawns so justly celebrated were really artificial productions, a thin stratum of earth being laid over the original sand surface. This stratum through use and continual watering has largely disappeared through the sand rendering it exceedingly difficult to maintain the grass sod. Nothing but a renewal of the earth stratum over the sand will put the lawns in substantial condition. This is a work of considerable cost.

* * *

In speaking of the death of Mr. B. G. Northrop, ex-secretary of the Boards of Education of both Massachusetts and Connecticut, the *Universalist Leader* of Boston says: Many people in all parts of the country are acquainted with "Arbor Day," but very few are aware that we owe that day to the knowledge and practical genius of a man who has just passed away, full of years and honors. Mr. Northrop was a successor of Horace Mann, in office and in ideas. He looked out on the world immediately around him and saw not only that it needed improvement, but how the improvement could be effected. Many devices for town and city and neighborhood betterment were conceived and set in operation by Mr. Northrop. He was the originator of "The Village Improvement Society," which has accomplished the transformation of so many places in New England and beyond. Libraries, reading-rooms, parks, drinking fountains, sprang up at his suggestion. He was the apostle of refinement and beauty, whose mission was to apply knowledge and taste to the modes of life of rural communities. Few statesmen or soldiers achieve so much for the world.



CEMETERY NOTES

It is proposed to issue bonds of the City of Boston to provide a chapel for Mt. Hope cemetery. This is one of the cemeteries controlled by the city.

* * *

In reporting a regular meeting of the Women's Cemetery Association, the Nunda, N. Y., *News*, closes with this commendable remark: All notices in regard to cemetery grounds are published gratuitously in the *News*, as we are compensated by seeing the cemetery kept in good order.

* * *

By the will of the late Miss Alice Thompson a sum of \$2,500 is bequeathed, the interest of which is to be applied annually to the care of the village cemetery of Ballston, N. Y., providing the cemetery be incorporated. Papers of incorporation have been presented to the board of trustees for its approval and consent duly given.

* * *

The ninety-fourth semi annual meeting of the Boston Catholic Cemetery Association was held on May 11th. The treasurer's report showed the following: Sinking fund \$25,103.08, perpetual care fund \$10,750.85, special fund \$5,389.47; total amount deposited in the name of the Boston Catholic cemetery association \$43,716.77. The total number of interments in Calvary, Benedict and Dorchester cemeteries amounts to 101,146.

* * *

Through the efforts of the ladies' of Riceville, Ia., a beautiful tract of seven acres has been secured as an addition to the public cemetery at that place; in order that the new portion might be laid out in accordance with the principles of modern cemetery usage, the citizens subscribed a sufficient amount to secure the services of a landscape architect and Mr. Frank H. Nutter of Minneapolis, Minn., has the work in charge.

* * *

The recent order of the Philadelphia Board of Health forbidding the interment of more than one body in a grave is arousing considerable opposition. Representatives of the various cemeteries in the city limits have met and discussed the matter. It was determined in the event of a committee being unsuccessful in having the order rescinded or modified, to carry the fight into the Courts, and to that end a permanent organization was effected.

* * *

During May the State Funeral Director's Associations' of Missouri, Indiana and Iowa held their annual meetings. The most marked features of these gatherings were the increased attendance and interest shown in the proceedings, and the pronounced inclination to educational influences. The Illinois, Nebraska and Michigan Associations are next in order and will be holding their yearly conventions within the next few weeks. The benefits of educational effort in all lines of public usefulness is being clearly demonstrated in the active results of association work.

* * *

The Arlington Cemetery Company, Lansdowne Heights, Delaware county, Pa., near the Philadelphia county line, on the declaration of war with Spain tendered to three of the Philadelphia regiments and other military organizations a cemetery lot prominently located and of suitable proportions for the interment of any of the men of these regiments who might be unfortunate enough to fall upon the field of battle, upon which the country was entering. The offer was made to the commanding officers with the following preamble: "We herewith respect-

fully beg leave to submit an offer made in sincere faith and with an earnest hope that the occasion for its acceptance may never arise."

* * *

The City of Alton, Ill., has received from the Mississippi Valley Trust and Savings Company \$1,500 set aside by the will of the late Jas. T. Drummond, to be held in trust for the care of the Drummond lot at Grandview cemetery. There had been some doubt as to the city's established right in the premises but City Counselor Baker in a written opinion found the case analogous to several upon record in which municipalities have held park and similar funds in trust and expressed his opinion that the proceeding would be perfectly proper. The money will be held by the city in trust and the earnings will be applied to the improvement of the lot, which is one of the most beautiful in the cemetery.

* * *

The Newton, Mass., Cemetery Corporation is to receive the sum of \$700 from the city of Newton in settlement of a claim which has been pending for some time. One of the heretofore greatest beauties of the cemetery was its chain of natural lakes fed by springs. Last year the lakes began to fail and it was discovered that the springs were being drained by the under drains of the sewers which had just been completed in that part of the city. This year indications pointed to a complete drying up of the sources of supply and a claim was filed with the city government. The justice of claim was acknowledged, and besides the above payment the lakes will be supplied from the city water supply.

* * *

At the annual meeting of the Spring Grove Cemetery Association, Hartford, Conn., the report showed a large amount of improvements made during the past twelve months principally in erecting the new office and in repairs on the Allyn chapel. The new office is one of the most commodious in the State for the purposes for which it was erected, and cost \$2,500. The repairs on the Allyn chapel, including the new steam heating system, cost not less than \$3,000. The new quarters of N. C. Wilder, Supt., who has been in charge of the cemetery grounds for a number of years, are all that could be desired. The waiting room for ladies has been arranged with special care and is very superior to the old place.

* * *

A petition for an injunction to restrain the congregation "Ghebra Thilim" from refusing petitioner, Solomon Heyman, from visiting the graves of deceased relatives interred in the cemetery of said association and preventing him from erecting headstones and coping around the graves was recently filed in the first city court, New Orleans. It appears according to the suit, that the congregation, in order to start the cemetery, agreed to inter the remains of petitioner's brother-in-law, Julius Stein, and later his wife (the sister of petitioner), Mrs. Julius Stein. Subsequently Heyman sought to have a coping and headstone placed at the grave, but the congregation refused to permit this or to allow him to visit the grave unless he paid \$25, although it was understood that the interments were to be gratis.

* * *

The annual meeting of the Hollywood Cemetery Company, Richmond, Va., was held May 10. The treasurer's report showed total receipts for the year, \$45,817.07, while the invested surplus was increased to \$81,000. Among the receipts were: For interments \$3,156.50; for work on lots, etc., \$1,065.80. Forty-eight lots sold realized \$10,069. The number of interments for the year were 336, making a total 16,992. The number of lots under annual care is 625 and under perpetual care 36. In regard to the latter a very active interest has been developed and

the current year is expected to give a very large increase in this direction. Many improvements have been carried out, among them the erection of a commodious chapel. Ground has been sold for the Ginter mausoleum, which is to be a commanding structure, and another granite vault is also to be erected. Slate graves are superseding brick in Hollywood.

* * *

The board of cemetery commissioners of Grand Rapids, Mich., have raised the wages of the men employed in the cemeteries, to 15 cents per hour; all overtime and night work to be paid for at an advanced rate. The men had asked for an increase and the board met them half way. By the provisions of the new charter the board is allowed 10 per cent. of the gross receipts of the cemeteries as a fund, the income from which is to be used for the perpetual care of grounds. The total receipts for the last year were \$12,045.39 of this amount \$7,174 came from Valley City cemetery. The board will request the council at its next meeting to set aside \$1,204.50 to the board to invest in trust funds. The board appears to have been doing excellent work, but they should agitate for a larger proportion of gross receipts, as 10 per cent. is inadequate for the purpose contemplated. A new office is to be built in Oak Hill, which will contain the offices of the superintendent, toilet and waiting rooms.

* * *

A writer in the Washington, D. C., *Star*, says of the Moravian cemetery at Winston-Salem, N. C.: It is the burial place of the Moravians, a communistic religious organization, which exists there in very large numbers. The Moravians are a very desirable kind of people. They are strict in their religious views, it is true, but they are a determined, untiring and prosperous people. They all work and they owe no one a penny. In their cemetery, as in their life, they have a place for everything and everything in its place. At one end of the cemetery married men are buried and the opposite side married women. At the other end unmarried women, and on the opposite side the unmarried men are buried. Each grave has a stone, but it contains nothing beyond the bare announcement of the name of the deceased, no date of death or age of the deceased being given in any case. Children are placed respectively on the male and female sides of the cemetery, but there is no family grouping.

CORRESPONDENCE.

Water Lilies.

Editor Park and Cemetery,

DEAR SIR: I regret I did not see PARK AND CEMETERY for April soon after it was issued. Unfortunately I did not see it until after the May issue and probably the June number will be at press before you receive this. Being interested in Aquatics I very naturally read the article on Water Lilies by your correspondent Geo. B. Moulder on page 26. I agree with most he says, but, my experience in this section of the country has been so very different from what his has been in Kentucky according to his statement, that I think for the benefit of your readers in so many and varied sections of the country, I would like to state my experience and also solicit statements from other growers in different sections, that we may profit by each other's experience, and assist each other in the selection of suitable varieties. Mr. Moulder states on page 27: "Doubtless there is a greater number of failures in water lily culture arising from an undue knowledge in the selection of varieties than from any other source.—If tubs are to be planted, select plants adapted to tub-culture."—In tubs any of the *Nymphaea pygmæa*, *N. Laydekeri* or *N. Odorata* families may be grown well. The two former species and

their varieties I have found satisfactory; not so *Odorata*. One or two are moderate growers but they are rambling growers and shy bloomers when confined to the limits of a tub, their proper place is in a natural pond, or in a fairly sized box in an artificial pond where they can remain undisturbed for two or three seasons.

Mr. Moulder says: "Nelumbiums make fine tub plants," especially *N. Speciosum* and *N. album grandiflorum* because they have been under rigid cultivation in the Orient for centuries." What! as tub plants? Did the ancients actually grow Nelumbiums in tubs? (American kerosene oil barrels.) No, there is no such record: preposterous. They were cultivated in natural ponds or sluggish streams, and the rigid cultivation they received did not change their character or make them adapted to tub culture, no more than Mr. M. can take a *Nymphaea pygmæa* and under rigid cultivation make it adapted to pond culture as is his gigantic *Nymphaea superba*. In another article where Mr. Moulder speaks so exultingly of *N. alba grandiflora*, he says: "It is a strong feeder and should have heavy rich earth." Granted this is so and I've no doubt about it, how much of such soil can be placed in a half barrel allowing sufficient water?

I have grown Nelumbiums in tubs and in most conceivable ways for years and I say emphatically, tub culture is the most unsatisfactory and unnatural method under which to attempt to grow them, they need abundance of heavy rich soil and this can not be administered to them in half barrels. True, three or four flowers and possibly a half dozen might be had in a season, but I've seen Nelumbiums in tubs for two or three consecutive seasons and never a flower; just as they arrive at a stage that flowers are, or are about to be, produced the leaves assume a sickly greenish yellow and the plant is starved into a semi-dormant condition, tubers are formed and the plants are ready for a cold snap even early in August.

Another word for *Nelumbium alba grandiflora*: I have grown this variety in New York and New Jersey states for ten years and it has never proved equal to its rival, the Egyptian Lotus or other Japanese varieties. I can give instances of tropical growth of *N. Speciosum*, but under cultivation especially in tubs and tanks, *N. album grandiflorum* and *N. Luteum* are in most cases most disappointing.

Speaking of tender *Nymphaeas* for tubs, Mr. Moulder says, *N. Mexicana*, *N. Flava*, and *N. Gracilis* are the BEST. My experience is that the flower is fairly good; it is a moderate grower and the flowers which are a rich yellow are produced in moderation quite third rate. It is hardy in the state of New Jersey. *Nymphaea Flava* is worthless, it makes good growth but seldom if ever a flower. It may be first-rate in its own native habitat, and in natural ponds. *Nymphaea Gracilis* is one of our best and free growing and flowering water lilies and will under fair conditions cover a surface of one hundred square feet, it should never be grown in a tub, unless the tub is submerged in an artificial pond. Grown in a tub it is simply dwarfed, it may exist and even produce flowers, but it is a greater distortion than to grow *N. Zanzibarensis* varieties which Mr. M. says may be dwarfed in tubs. Of these THREE BEST for tubs (?) two are yellow and one white, and not one of these are first-rate for tubs. There are but few tender lilies suitable for tubs the best is *N. Elegans* and *N. Columbia*, the latter is the deepest crimson amongst the night bloomers. But we have numerous varieties amongst the hardy *Nymphaeas* including the richest and most varied in color—some blue, moderate growers and very free flowering, and it will be more satisfactory to grow them than to attempt to dwarf the strong growing varieties. Tubbs are good receptacles for water lilies provided they are submerged in an artificial pond, the leaves require water surface space, *N. Zanzibarensis* grown thus will produce leaves 22 inches over, which is about the diameter of a tub.

Riverton, N. J.

W. Tricker.

Association of American Cemetery Superintendents.

G. W. CREESY, "Harmony Grove," Salem, Mass., President.
ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., Vice President.
F. EURICH, Woodward Lawn, Detroit, Mich., Secretary and Treasurer.

The Twelfth Annual Convention will be held September 13, 14, 15, at Omaha, Neb.

The Park and Out-Door Art Association.

JOHN B. CASTLEMAN, Louisville, Ky., President.
L. E. HOLDEN, Cleveland, O., Vice-President.
WARREN H. MANNING, Tremont Building, Boston, Mass., Secy. and Treas.

The next meeting of the Association will be held at Minneapolis, Minn., June 22, 23, 24, 1898.

Publishers' Department

Park Commissioners and Cemetery trustees are requested to send us copies of their reports.

Photographs and descriptive sketches of interesting features in parks and cemeteries are solicited from our readers.

Annual Convention of the Association of American Cemetery Superintendents.

The 12th Annual Convention of the Association of American Cemetery Superintendents will be held at Omaha, Neb., Sept. 13, 14 and 15. The Dellow Hotel, cor. 14th and Capitol ave., has been selected as headquarters. Street cars from all depots in the city pass this hotel or within one block of it. The hotel management has assured the committee that everything that can be done for the comfort of our members and friends and to forward the interests of the convention will be done.

RATES: American Plan from \$2 to \$3 per day.

European, \$1 and upwards.

The programmes in full will be published in the next issue of PARK AND CEMETERY. Questions for the question box will be gladly received and will have due consideration at the convention. Address all communications to J. Y. Craig, Omaha, Neb.

At a meeting of the directors of the Franklin, Pa., Cemetery Association held recently, Cyrus Phipps, was unanimously re-elected superintendent of the association's property. Mr. Phipps has served in that capacity for the past 15 years.

An invitation has been received from Mr. W. A. Manda, South Orange, N. J., to

inspect his New Evergreen Hardy Roses, the result of crosses between Rosa Wichuriana and the Teas. These wonderful hybrids will withstand the attacks of insects, are hardy and evergreen through the winter. Mr. Manda is making great strides in rose breeding.

Mr. Bellett Lawson is now at work improving the recently organized cemetery of "Grand View," at Wilkesbarre, Pa. It is a rough piece of land but commands magnificent views of the Wyoming Valley, and offers opportunities for the beautiful landscape work which Mr. Lawson will undertake.

RECEIVED.

Third Annual Report, Indianapolis, 1897. Illustrated with half tones.

Thirtieth Annual Report of the Commissioners of Lincoln Park, Chicago, from April 1, 1897 to March 31, 1898.

Fifty-sixth Annual Report of the business of the Lowell Cemetery to the proprietors, 1898. The report contains a list of Trust-fund lots and lot owners of record.

MAINE AGRICULTURAL EXPERIMENT STATION.

Bulletin 43. Fertilizer Inspection, contains the analyses of Manufacturer's samples of all brands of Fertilizers licensed before February 25, 1898.

Bulletin 44. Feeding Stuff Inspection.

CORNELL UNIVERSITY AGRICULTURAL EXPERIMENT STATION, ITHACA, N. Y.

Bulletin 147. Fourth Report upon Chrysanthemums.

Fifth Annual Report of the Street and Park Commission of the City of Manchester, N. H. 1897. Illustrated with half tones.

Rules and Prices, Forest Hill Cemetery, Kansas City. Illustrated with half tones.

Proceedings of the Tenth Annual Meeting of the Florida State Horticultural Society. Held at Orlando, Fla., May 4, 1897.

Annual Report of the Park Commissioners of the City of St. Louis, 1896-97.

After several years reading PARK AND CEMETERY, I cannot think of doing without it; each number enhances its value and in the management of a cemetery, whether large or small, I think every superintendent would study his own interest by being a subscriber. Henry Thompson, Supt., Mount Pleasant Cemetery, Deer Park, Ontario, Canada.

RESIDENTIAL SITES AND ENVIRONMENTS. Their Conveniences, Gardens, Planting, etc. By Jos. Forsyth Johnson, F. R. H. S. Consulting Landscape Gardener and Garden Architect. Author of "Natural Principles of Landscape Gardening." Royal quarto. Price, cloth, \$2.50, New York. A. T. De La Mare, Printing and Publishing Co., Ltd.

This pretentious work while containing a mass of general information and considerable valuable suggestive matter, showing a varied knowledge of the propositions discussed, is a most disappointing volume.

One would not want to find fault with the theories used in the many chapters offered to the reader, because in the comparative modernity of landscape art, its practitioners differ more or less, while all the conscientious workers undoubtedly try to act under the influence of its true principles. But in the present work the crudeness of the illustrations altogether mar the probable intentions of the author, which appears to be to present a practical work on landscape art for various situations and the materials and methods to be adopted, drawn from such theoretical suggestions or practical examples as his practice may have provided. But the obtrusive formality in many of the designs illustrated either run counter to the ideas now recognized as best, or misrepresent the intention of the author, which demonstrates the necessity of the greatest of care in selecting designs and presenting them to the reader under the best conditions known to the draftsman's art or their reproduction for book purposes. The value of the work would have been largely increased by a wise selection of views of existing landscape work.

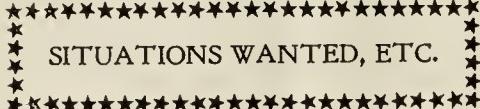
The book contains, however, a great amount of valuable reading matter on landscape art, its artistic requirements and means and methods to meet those requirements in many practical examples. Its instructive matter on planting out and grouping will claim attention, as well as the many discussions on the relative merits of plants for certain purposes. A suggestive chart is given by which records may be made continually on the peculiarities and characteristics of plants as they develop, a feature of value with all lovers of plant life. Tables of plants for special purposes are given together with a list of bedding material. The questions of soil, drainage and the planting and care of shrubs and trees are given consideration, while the details in which engineering plays a part are discussed with due regard to the importance which they suggest.

The gypsy moth has found its way into Congress, says the *New England Florist*. Senator Lodge has introduced a memorial asking federal aid for Massachusetts, in the endeavor to destroy the pest that has cost the Bay State several million dollars, and which would have spread over New England had not Massachusetts fought hard to kill it. When Senator Lodge's memorial comes up for action, it will be an apt moment for Senator Hoar to force his bill for the protection of birds. More live birds will make more dead moths.

A petition to Congress asks for \$25,000 for the Improvement of the harbor of the Inter State Park, Dalles of the St. Croix and the channel of the St. Croix river. The government has control of the Harbor of the Dalles of the channel of the river St. Croix, from the Upper to the Lower Dalles, passing through the park, giving a shore line of some eight miles including the islands. This is in connection with the effort of the states of Wisconsin and Minnesota to preserve this beautiful scenery as a national park.

The cemeteries of Germany, Berlin have recently been infested by people who try to lift the gravestones in the hope of find-

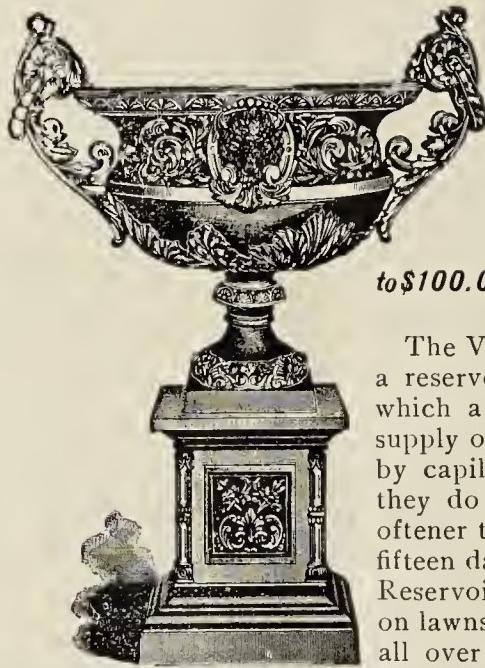
ing banknotes under them. Grunenthal, the government bank official who is accused of having appropriated either misused banknotes or notes withdrawn from circulation, had picked out graveyards as hiding places for his plunder. Large sums have been found by the police under three gravestones already.



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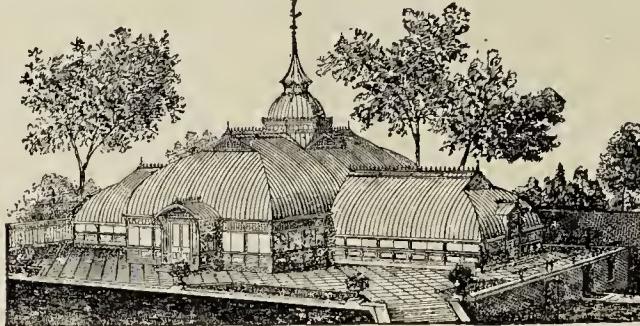
This system is thought to embrace the best features of the most popular forms of burial records now in use and may be adapted to large or small cemeteries. The Interment Record gives all of the necessary information in regard to the deceased, and the Lot Book locates every grave, so that it can be readily found at any time. The books are printed on heavy paper, substantially bound, and furnished in different sizes depending upon the requirements of the cemetery.

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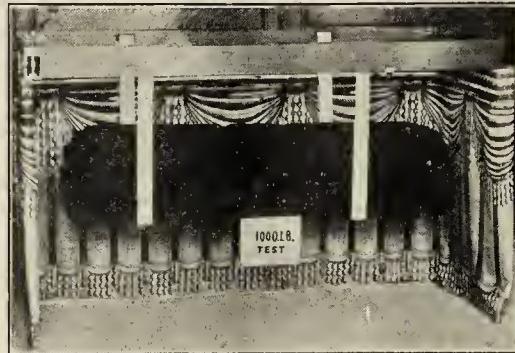
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CONTENTS.

EDITORIAL—THE OMAHA CONVENTION OF THE ASSOCIATION OF AMERICAN CEMETERY SUPERINTENDENTS—THE MINNEAPOLIS CONVENTION OF THE AMERICAN PARK AND OUT-DOOR ART ASSOCIATION.....	81
RESIDENCE STREETS, XI.....	82
PROGRAMME OF THE TWELFTH ANNUAL CONVENTION OF THE ASSOCIATION OF AMERICAN CEMETERY SUPERINTENDENTS, OMAHA, NEB.....	83
*WOODWARD LAWN CEMETERY, DETROIT, MICH.....	84
*THE CONVENTION OF THE PARK AND OUT-DOOR ART ASSOCIATION AT MINNEAPOLIS, MINN	85-9
*ROYAL BOTANIC GARDEN, KEW, III.....	89
*A PLANTING CHART OF GARDEN PLANTS.....	91
APPRECIATION OF NATURAL BEAUTY	92
*GARDEN PLANTS—THEIR GEOGRAPHY, XXXI	94
THE INFLUENCE OF PARKS ON THE CHARACTER OF CHILDREN.....	95
PLANT PROPAGATION FOR PARKS	96
STREET TREES.....	96
CORRESPONDENCE.....	96
PARK NOTES.....	97
CEMETERY NOTES.....	98
PUBLISHER'S DEPARTMENT.....	99

*Illustrated.

THE programme of the Twelfth Annual Convention of the Association of American Cemetery Superintendents will be found in another column. The convention this year is to be held in Omaha, Neb., a fact which draws particular attention to this section of the country, apart from the interest attaching to Omaha as the site of the Trans-Mississippi International Exposition, which offers great attractions for any spare time the superintendents may find. In the march of cemetery improvement it should be quite an appropriate opportunity that Omaha was selected as the convention city at this time. The east is well advanced in the cause, the northwest is rapidly moving, and it is in order that the great valley states should feel the impulse, and join in the progressive work. The

field of experience covered by the programme comprises the principal features of cemetery development, from the laying out of the grounds to the details of management, and the officials of the numerous cemeteries scattered over the central states, cannot afford to miss such an opportunity of acquiring practical knowledge and bringing themselves up to the times as is offered in this Omaha convention. Another view of the subject is that included in the business proposition. Modern ideas on cemetery practice have been found to pay; they compel public recognition of the benefits derived from properly conducted and attractive cemetery properties; the latent spirit of progress in the community is given a new life, and hitherto unthought of improvements gain impetus from the higher sentiments promoted by the well cared for cemetery. Every cemetery association would be sowing seed for a bountiful harvest, by arranging to be represented at the Omaha convention of Cemetery Superintendents, in the persons of its superintendent and other officials as conditions may dictate. Apart from the regular programme, the discussions always lead to the dissemination of practical experience, gathered from the every day duties of the foremost men in the calling.

AT the meeting of the American Park and Out-door Art Association, recently held at Minneapolis, the papers read were of a high order, their main purpose being to stimulate thought and action that would result in making our homes, school grounds, parks and streets more beautiful, and hence the association well deserves the support and encouragement of all public-spirited citizens. It will undoubtedly serve a useful purpose, benefiting those who attend and all those who read its reports, as long as it can retain the hearty co-operation of men who devote their lives to the objects it has in view. At its meetings, the time should be mainly devoted to the reading and discussion of papers, and the study of actual examples of "art out of doors." As soon as a considerable portion of the time is devoted to political matters, that is to the discussion of place and time of meeting, election of officers and changes in constitution,

those whose attendance really make the meetings of value, will lose their interest, and the character of the organization will degenerate. It will be well for the Association if the business, "the housekeeping," as one of the members called it, can be left entirely in the hands of the council, but the council must be composed of men who have a national reputation for their skill and good judgment in the management or designing of public parks or other ornamental grounds in which the public has an interest. The man who, through influence, may have recently obtained a position on some park board, and who will in all probability be soon succeeded by others like himself, should, if possible, be suppressed. The field of usefulness of the Association is so broad, and so intimately connected with the higher development of our communities, that the outset of its career must be jealously guarded that absolute faith in its ideal purpose may be engendered in the minds of all who may come into touch with its activities.

A GENERAL admission of the truth of the quotation that the child is father to the man seems to govern all propositions for improvement, whether of society or its material surroundings, and this seems to be clearly indicated by the efforts in all our large cities to provide recreation and attractive instruction for the little dwellers in the slums. A perusal of the report of the second annual meeting of the Park and Outdoor Art Association, gives further prominence to the fact. Many of the papers read were devoted to the questions of the relation of the park to the child in its educational or physical sense, and much stress was laid on the various phases of the question. It is undoubtedly a wise policy in any case to make the education of the rising generation concurrent with the immediate effort to carry forward any economic movement.

FROM the earnest interest displayed by the citizens of Minneapolis in the proceedings of the association, coming as it did from a community almost lavishly supplied with park facilities, it may readily be assumed that the time is ripe for a crusade in the interest of outdoor improvement. There is no doubt as to the extent of the field to be covered, but with a sentiment thoroughly aroused, as it is possible to do by wise and persistent effort, and especially in the direction of cultivating and directing the enthusiasm of the young when brought into harmonious relations with nature, there will surely come about a new order of things,—a condition where the surroundings of the home will receive comparatively as much attention as its interior.

RESIDENCE STREETS.—XI.

CARE, (*Continued.*)

In addition to taking care of the trees and shrubs, the grass along the parkway should be mown, the roadway cleaned and sprinkled, the sidewalks swept and kept free from leaves or snow and all papers picked up.

If people generally could learn to see flowers and enjoy them without picking or destroying blossoms that would give pleasure to other passers-by as well as themselves, the grass might be allowed to grow in places until snowdrops, crocuses, daffodils and perhaps some of the lilies had bloomed and ripened their bulbs for the production of another crop of flowers the coming year. These and other bulbous plants could easily be planted in the grass. There are hundreds of other herbaceous plants, such as yuccas, the irises, lupines, butterfly weed, columbines, harebells, native asters, sunflowers and golden rods, which are quite hardy, live year after year, and produce beautiful flowers which would be delightful to see if one was not constantly exasperated by seeing the flowers ruthlessly torn off and nothing but broken stems left in their places.

It should be the duty of some man to be constantly at work sweeping the dust and manure from the roadway and picking up and taking care of all stray papers. This is really an inexpensive matter, and nothing adds more to the neatness of a street. One man with a wheelbarrow, broom, rake and shovel can take care of two miles of well made streets. It should be the duty of the residents to assist him by refraining from throwing papers and other refuse where he will have to take care of them. The removal of the dust will make the surface of the roadway itself more agreeable, and will help to keep the houses clean and the foliage bright and fresh during dry windy weather.

Every street should be sprinkled as well as cleaned. This I believe in the end is a measure of economy since it helps to preserve the road surface. It should however, be judiciously done. Often too much water is used so that the surface becomes soft and muddy, allowing heavy loads to make ruts which by holding the water tend to become deeper and deeper. The surface should be merely dampened not flooded. Often where sprinkling is done by contract the contractor may save some time by deluging the street but this method certainly ought to be prohibited. It tends not only to the production of ruts running lengthwise but it makes little ridges and depressions running across the street which make the surface quite uncomfortable especially for bicycle riders.

The smooth hard surface of a well kept road, the neat appearance of a street which receives the

attention above indicated, and the fresh, green foliage so different from that along the sides of dusty drives ought to repay any community for the small expense incurred. I wish everyone could have the spirit and imitate the action of an old gentleman whom I saw one day walking along an unfrequented country road. He noticed an old newspaper which some one had carelessly thrown among the bushes at the side of the driveway, and picking it up with the remark that he never liked to see such things flying about, put it carefully where it would not be near any dry leaves and then burned it up.

In northern latitudes, the care of the snow in winter is an important thing. Where left to individuals, some of the citizens are apt to neglect their places and in this matter one is as much interested in his neighbor's sidewalk as his own. It is best for some one person to be responsible for the care of all walks in a certain district. He should be out early in the morning and do the work when it can be easily done. When thaws occur, catchbasins should be kept open and such ditches made through the snow as will allow the water most readily to run away. It is a good plan to see that all catchbasins are clean and in good order before it is time for the first snow. After the snow is all gone and the frost is out of the ground (usually about the first of April in this latitude) it is a good plan to roll macadamized or gravel streets to make them hard and firm, thus counteracting any effect which the frost may have had.

In almost every community there are some persons so selfish, so lacking in public spirit, so willing to allow their neighbors to do things for them, that it would be a measure of justice for a uniform tax to be levied for the purpose of taking good care of the streets in the manner above indicated. I believe it would be to the advantage of any individual or corporation in subdividing a large tract of ground for a residence district to make a provision for the perpetual care of the streets by setting aside a portion of the receipts from the sale of lots for this purpose. The fund thus created could be placed in the hands of a trust company for safety, the interest only being used. This income could be expended by the individual or corporation making the sub-division until all lots were sold, when provision might be made for its expenditure by a committee not exceeding three members elected by the residents or lot owners. It is fully as important for a citizen to have the street in front of his next neighbors house sprinkled and cared for as it is to have such work done in front of his own, and the provision just suggested by insuring permanent, uniform care of the street would add, I believe, far more to the value of the lot than the amount set aside for the purpose named. *O. C. Simonds.*

**PROGRAMME OF THE TWELFTH ANNUAL CONVENTION OF THE ASSOCIATION OF AMERICAN CEMETERY SUPERINTENDENTS,
OMAHA, NEB.**

September 13th, 14th and 15th. Headquarters at the Dellone Hotel, corner 14th and Capitol avenue, Omaha, Neb.

September 13th, MORNING SESSION, 10 A. M.:

Prayer by the Rev. Roy S. Hand—Reception of New Members and Roll Call—Address of Welcome by his Honor, Frank E. Moore, Mayor of the City of Omaha—President's Address—Secretary and Treasurer's Report—Communications—Appointment of Committees—Question Box—Informal Discussion—Recess for Lunch.

AFTERNOON SESSION, 2 P. M.:

“Our Association, Its Objects and What Has Been Accomplished.” By O. C. Simonds, Chicago, Ill.

“Why New Cemeteries Should Adopt the Lawn System.” By A. W. Hobert, Minneapolis, Minn.

“What Trees and Shrubs are Suitable for Cemetery Embellishment.” By Bellett Lawson, Sr., Wilkesbarre, Pa.

Discussion.

Visit to the Lininger Art Gallery and a Bird's-Eye-View of Omaha from the High School Grounds.

EVENING SESSION, 8 P. M.:

“Sunday Funerals.” By Rev. S. Wright Butler, Omaha.

“The Importance of System in Cemetery Management.” By H. J. Diering, Woodlawn, N. Y.

“Cemetery Records.” By Frank D. Willis, St. Paul, Minn.

September 14th, MORNING SESSION:

“The Importance of Large Bodies of Water in the Landscape, Natural or Artificial, in Cemeteries and Parks.” By Geo. H. Scott, Chicago, Ill.

Nomination of Officers.

“The Early History and Development of the City of Omaha and the State of Nebraska.” By Dr. Geo. L. Miller, Omaha.

“Review of the Cincinnati Meeting.” By M. P. Brazill, St. Louis, Mo.

Question Box.

AFTERNOON SESSION, 2 P. M.:

Visits to the Cemeteries, City Waterworks at Florence, North Boulevard and Exposition Grounds.

EVENING SESSION, 8 P. M.:

Election of Officers.

“Driveways, Their Construction and Maintenance.” By Prof. Geo. R. Chatburn, State University.

“The Pleasure I Derive from Seeing Our Work Expand.” By Charles Nichols, Newark, N. J., the Father of our Organization.

Question Box—Informal discussion.

September 15th, MORNING SESSION, 9 A. M.:

Roll Call—Installation of Officers.

“Aquatic Plants and Other Flowers in Our Cemeteries.” By Wm. Stone, Lynn, Mass.

“The Importance of Preserving the Beauties of Nature in Our Cemeteries.” By Timothy McCarthy, Providence, R. I.

“The Importance of Placing Our Cemeteries Under Perpetual Care.” By George M. Painter, Philadelphia, Pa.

“The Advantage of the Lawn System of Cemetery in Our Western States.” By S. W. Rubee, Marshalltown, Iowa.

Informal discussion.

AFTERNOON SESSION, 2 P. M.—In the hand of the Executive Committee:

Reading of Papers and Communications—Unfinished Business—New Business—Adjournment.

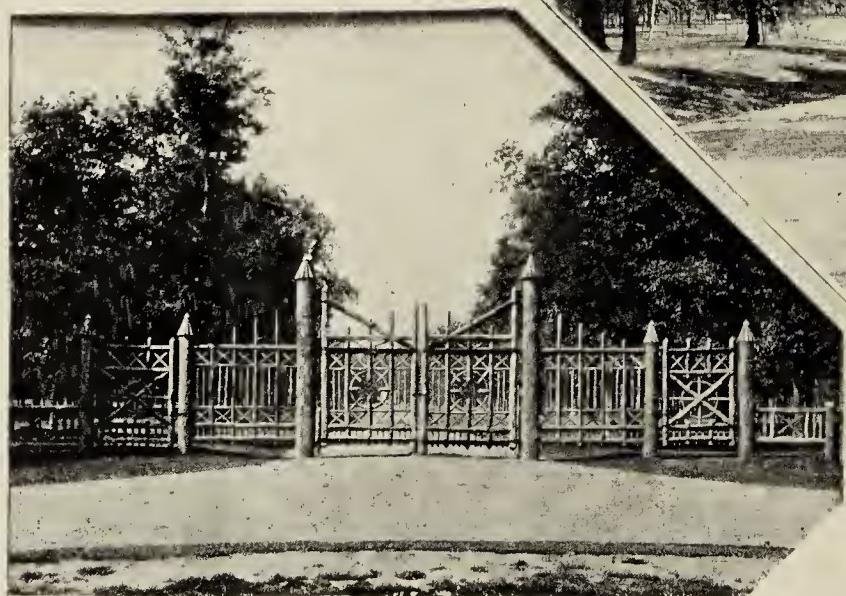
PARK AND CEMETERY.

WOODWARD LAWN CEMETERY, DETROIT, MICH.

Woodward Lawn Cemetery, Detroit, Mich., with its rustic landscape, was dedicated to the public on Saturday, June 18, 1898, with appropriate services conducted by several clergymen of that city. Electric cars had been chartered to carry those who wished to attend the services to the grounds; about 1,000 were in attendance.

Some few facts in connection with Detroit's new cemetery may be of interest. The establishment of the cemetery was due to the fact that a burial place sufficiently distant from the rapidly growing population of Detroit in a northerly direction is needed.

The tract selected contains the highest land of any property in this locality and affords necessary facilities for drainage; the soil is suitable, and with several ridges and depressions affords a variation in levels and undulations. It contains 138 acres which originally were, and a portion of which still is considerable of a wild-



RUSTIC GATES, WOODWARD LAWN CEMETERY, DETROIT.

wood with heavy undergrowth; all varieties of forest trees are represented, the oak predominating. Between 36 and 40 acres have been robbed of their wild character, thinned out, graded, drained and transformed into burial sections of various outline and size by gravelled drives in accordance with a plan furnished by E. W. Bowditch, landscape architect.

The entrance is a unique rustic structure and is set back a considerable distance from the approaching avenue, thus leaving ample for grounds for ornamental planting. The entire front on the avenue is fenced in harmony with the massive rustic gateway and is being planted with a large variety of vines, trailers and shrubbery.

On entering the grounds the office is located on the left; it is a pretty cottage building of unique architecture, the exterior panelling being finished in Adamant plaster. In course of time vines and trailers will enhance the picturesqueness of this building. The interior contains fine waiting room with toilet, business room with fire proof vault and superintendent's office; in winter the building is made comfortable by furnace; for extreme cold weather a large fireplace can be used in addition. The plan utilizes the northeast corner of the grounds for superintendent's residence, greenhouses, barns, sheds, etc., which in due time will be completed. A tem-



VIEW IN WOODWARD LAWN
CEMETERY, DETROIT.

porary receiving tomb is provided for; this in course of time will be replaced by a large and imposing structure; provisions will also be made for electric cars, which now pass the entrance, to enter the grounds in the southeast corner thus affording opportunity for the use of

funeral cars. A system of water works is in contemplation, in fact work has been begun on boring for water and as soon as satisfactory results will warrant, the plan for a system will be adopted. The waterpipe will be put down so that ultimately city water can be made use of.

Improvements on definite lines will be continued from time to time to make Woodward Lawn a beautiful and quiet cemetery.

To show his confidence in the success of this cemetery, Mr. F. J. Hecker, has built upon a circular plat commanding a view of the entire main avenue a beautiful and costly mausoleum. The exterior is built of pure white statuary marble, the interior is constructed of Tennessee marble; cata-

combs of slate slabs and glazed brick, and arched ceiling of marble mosaic. Beautiful cast bronze doors and grilles protect the interior.

Rules and Regulations adopted for the management of this cemetery were selected from those in force in the foremost cemeteries of the country, and will operate to provide to the greatest possible extent for the preferences of lot owners, as well as to secure the stability of improvements, the proper mode of burial and the respectful observance of the sacredness of the place.

Provision is made for the perpetual general care of the entire grounds, without further charges to lot owner. The price of a lot includes its share in the cost of such care, under which the avenues and sections will be kept in neat and proper condition, trees and shrubbery planted out, trimmed and pruned. The grass likewise will be kept in good condition and will be mowed as required to ensure a neat and trim appearance and condition.

This will not extend to keeping flower beds, flowers in vases or special work of any character nor any stone work in order. For such special work and any other purpose the association will receive in trust from lot owners any sum, the interest of which is to be expended upon such lot, as may be designated by the terms of said trust.

The Woodward Lawn Cemetery Association was organized in 1895, actual work of improvements were begun early in the summer of 1896 under the supervision of a civil engineer.

The cemetery company secured the services of Mr. Frank J. Eurich as superintendent at the beginning of the year. This gentleman is the secretary of the Association of American Cemetery Superintendents, and is a man of advanced ideas in cemetery affairs.

THE CONVENTION OF THE PARK AND OUTDOOR ART ASSOCIATION AT MINNEAPOLIS, MINN.

The second annual meeting of the American Park and Outdoor Art Association convened at the West Hotel, Minneapolis, Minn., on Wednesday, June 22, at 10 a. m. In the absence of the president, Col. Castleman of Louisville, due to military exigencies, Mr. L. E. Holden, vice-president, Cleveland, took the chair, with some 50 members and guests present.

The proceedings opened with a greeting from the Chairman and the introduction of the Mayor of Minneapolis, Hon. Robert Pratt, who cordially welcomed the Association, and in his speech touched upon many points of the Association's work in its relation to the welfare of the community. It was apparent from the opening of the meeting that the most prominent feature of the convention would be

the development of the interdependent relations between the educators and leaders in social progress, and the exponents of outdoor art as represented by the members of the association. It was suggested in the mayor's address, the chairman's reply, and in the presence of several ladies, prominent in the city's progress, who entered actively into the spirit of the meeting.

Following the introductory speeches the reports of the Executive Committee, R. H. Warder, Cincinnati, chairman; Secretary and Treasurer, Warren H. Manning, Boston, and the committee on Constitution and By-Laws, John C. Olmsted, Boston, were disposed of, the consideration of the Constitution and By-Laws being made a special order for the next day.

A paper on "Playgrounds and Public Squares" was read by Prof. W. W. Folwell of the University of Minnesota and president of the Minneapolis Board of Park Commissioners. This was an able and suggestive paper, which we hope to publish in an early issue. In the discussion which followed many details of attractive and instructive occupations for children, in their relations to the art and landscape idea connected with their surroundings, were suggested, and facts related showing that an impetus for outdoor improvement may lie in the natural inclinations of children. It was stated that Detroit intends to label its trees and shrubs in a way to convey popular and botanical names, and to engage a teacher of botany to more thoroughly distribute knowledge. Last year the city took up zoology.

Mr. O. C. Simonds, Chicago, followed with his paper on "Appreciation of Natural Beauty." This paper is given in another column. Mr. Simonds is a strong advocate of leaving nature alone as far as possible, so as to retain all natural charms both by the roadside and in the landscape, and in his paper he earnestly protested against the ruthless havoc wrought in natural effects by many efforts at so-called improvements.

In the course of the discussion Mrs. Robert Pratt of the Woman's Improvement League of Minneapolis, of which society several members were present, gave information touching the work among the school children, and the efforts of the teachers in leading them to the parks to study trees, teaching them wild and cultivated flowers and the varieties and habits of the birds, all to instill rather a love of nature than for the time to deal in facts.

In opening the afternoon session the chairman, speaking of the next paper on the program, paid a glowing tribute to the English suburban homes. Mr. Charles N. Lowrie, landscape architect of New York, then read his paper on "Suburban Home

Grounds," which evoked considerable discussion, especially directed to the question of continuous lawns in residence districts. There must always be division of opinion on this subject, owing to the various conditions bearing upon the problem. It was conceded, however, that whatever division or boundary was established it must be inconspicuous and made to comport with the surroundings.

A paper by Mrs. Fanny Copley Seavey, who was unavoidably absent, on "Missionaries" was read by Mr. R. H. Warder. It spoke of many old favorite flowers and the missionary work they

read a paper on "Improvement of Homes and Home Surroundings, School and School Grounds, by the use of Flowers and Plants," and it practically gave an account of the work of the League, and especially with that department in which flowers and children can be made to play an important part in the improvement of conditions.

Mr. Chas. M. Loring, for so long intimately connected with the development of the Minneapolis Parks, read a paper, written at Mr. Loring's solicitation, from the veteran landscape architect, Mr. H. W. S. Cleveland, designer of the park system.



LORING PARK, MINNEAPOLIS, MINN.
These Illustrations of Minneapolis Parks are by the courtesy of the Park Commissioners of that city.

accomplished among children, and was warmly received.

As a trolley ride to visit Minnehaha Park required prompt attention at 4 p. m., an adjournment for that purpose closed the discussion.

Minnehaha Park is a tract of some 125 acres, picturesquely situated about the Falls of Minnehaha, which will always give it a most romantic interest; it has, however, park effects of considerable beauty apart from its principal feature. This enjoyable ride was the first of many social functions interspersed throughout the proceedings.

The evening session was held in the First Unitarian Church, under the charge of Mrs. Robert Pratt of the Woman's Improvement League. She

The associations connected with this really suggestive paper assured a warm reception.

A paper on "Recreation plus Education," by Mr. Wm. H. Tolman, Secretary of the New York Association for the Improvement of the Condition of the Poor, read by Mrs. J. F. Force, and a letter from Mrs. Sarah Webb, Louisville, Ky., read by Mr. Manning, brought the proceedings to what was really a lecture on "The Practical Adaptation of Outdoor Art to Homes of Large Communities, Especially the People in the Middle Classes," which was given by Mr. E. L. Shuey of the National Cash Register Co. of Dayton, O. This was the most popular feature among the papers offered at the convention. It demonstrated what could be done

in a community of working people, the extraordinary reformation brought about, while at the same time it was explained that all the benefits did not accrue to the employed, but the better conditions prevailing, the higher moral aspects created, redounded most beneficially to the employing company. The changed conditions are so remarkable, and should be of such widespread interest, that we shall give the paper special attention in an early issue. Moreover, the principles involved should be of general application.

In the course of the afternoon session the question of the convention city for next year was decided in favor of Detroit, Mich.

Thursday morning, June 24, was spent in a drive over the park and parkway system of the city, for which the citizens courteously provided their private vehicles and in which many ladies participated. No city in the Union affords more delightful driving facilities, with its magnificent series of lakes, than Minneapolis, and a considerable mileage of shore line is included in the park system. The first stop was made at Loring Park, an urban park of some 36 acres of land and water, named in honor of Mr. Chas. M. Loring. Here the party alighted and traversed its shady paths to another entrance, passing en route its picturesque lake and viewing the Ole Bull monument. The freshness and brilliancy of lawn and foliage, the delightful atmosphere and the newer forms of trees and shrubs were intensely interesting. The drive resumed, the route lay out on Superior avenue and Kenwood boulevard, around Lakes of the Isles, Calhoun and Harriet, thence through Minnehaha boulevard, and other residence boulevards to headquarters.

A few words would be utterly inadequate even to suggest the ever ranging panorama of landscape and waterscape enjoyed in this drive, so it must be left to the memories of the visitors who enjoyed it.

The chief business of the afternoon session was the adoption of the Constitution and By-Laws, the discussion and passage of which occupied considerable time. In the sections of the Constitution,

concerning which there appeared to be much divergence of opinion, such as the name of the association and the power of the proposed governing council, amendments were made, which finally carried them with large majorities, so that the association starts on its career of usefulness under laws which meet the approval of its membership. The by-laws will be finally revised, to harmonize exactly with the constitution, by the governing council. The name of the association was decided to be "The American Park and Outdoor Art Association."

A paper by Dr. Orlando B. Douglas, M. D., New York, on "The Relation of Public Parks to Public

Health," was next read by Mr. R. H. Warder, which was followed by one from Mr. Christian Wahl, president of the Milwaukee Board of Park Commissioners, on "The Duties of Park Commissioners. Mr. Wahl knew whereof he spoke and offered many valuable suggestions for and criticisms on, such officers. The paper made a decided impression.

The session closed to participate in a reception tendered the association by the Minneapolis Improvement League at the home of its president, Mrs. H. F. Brown. This was a charming social



BICYCLE PATH, INTERLACHEN, MINNEAPOLIS PARKS.

interlude. The ladies gave a warm welcome to the guests, small talk was largely tabooed for the more solid subjects into which all entered with mutual regard, and amid ferns and roses and in the refined atmosphere of culture an eminently delightful hour was passed, which had a still further happy effect in promoting acquaintance preparatory to the affair of the evening.

The banquet tendered to the association by the Minneapolis Board of Park Commissioners at the West Hotel closed a day replete with gratifying business and social activity. Although Minneapolis was partially denuded of its progressive women by reason of the Denver Convention, that fact was not realized. A large number of ladies graced the banqueting hall, which tends to emphasize the suggestion that outdoor art is a question that has no limit in the community and is one of practical interest to all; in fact, it undoubtedly comes within the field of woman's activity, especially in the domain of education. Following the material department of the function the following toasts were responded to under the direction of Prof. Folwell, toastmaster: "Our Pioneers," by Mr. R. H. Warder, Cincinnati; "Parks and Politics," by Mr. Joseph H. Wheelock, St. Paul; "The Ladies," by Mr. L. H. Holden, Cleveland; "Parks and the Catechism," by Judge C. H. Woods, Minneapolis; "How We've Done It," by Mr. P. H. A. Balsley, Detroit.

The last day of the convention proper was opened by the reading of papers. Mr. Fred Kanst South Park, Chicago, read a paper on "Plant Propagation for Parks," and was followed by Mr. Charles M. Loring, Minneapolis, in a paper on "Tree Planting on Public Streets." On account of stress of business two papers, "The Aesthetic Side of Forestry," by B. E. Fernow, Chief of the Division of Forestry, Washington, D. C., and "Park Woodlands and Plantations," by J. A. Pettigrew, Supt. of Parks, Boston, Mass., were read by title and ordered printed in proceedings. This covered the list of papers.

After the reading of the papers the reports of the Auditing Committee was acted upon, which was followed by that of the nominating committee for officers for the ensuing year.

The nominations were for President: Chas. M. Loring, Minneapolis; Secretary, Warren H. Manning, Boston; Treasurer, E. B. Haskell, Boston; Vice-Presidents, P. H. A. Balsley, Detroit; John C. Olmsted, Boston; R. H. Warder, Cincinnati; E. J.

Parker, Quincy, Ill.; Lewis Johnson, New Orleans; M. L. Moore, Toledo. These gentlemen were unanimously elected to the respective offices.

A number of resolutions were then voted, among them: Resolution of thanks to the chairman, Mr. L. E. Holden; Memorial Resolutions for the late Mr. A. Stiles, New York, Pack Thomas, Louisville, B. G. Northrup, Clinton, Ia.

A vote of thanks and cordial appreciation was extended to the park commissioners and citizens of Minneapolis; to Mr. and Mrs. H. F. Brown and women of the Improvement League for the reception given; to Colonel West of the West Point Hotel for the considerate attention; to F. H. Peavey for his invitation to visit Lake Minnetonka; to the Minnesota Horticultural Society to the Twin City Rapid Transit company and to the press of Minneapolis.

The Park and Outdoor Art Association in annual meeting, assembled at Minneapolis, Minn., unanimously urge the importance of preserving and intelligently managing the forest areas of this country.

We indorse the efforts of the American Forestry Association



MINNEHAHA: "'Till he came unto a streamlet,
In the middle of the forest,
To a streamlet still and tranquil."

to defeat a measure pending in congress, the purpose of which is to restore the areas set apart as forest reserves by President Cleveland.

Resolved, That copies of these resolutions be sent to the president of the United States, the secretary of the interior, committees on forestry of the United States senate and house of representatives, ex-Presidents Harrison and Cleveland, and the president and secretary of the American Forestry Association.

Resolved, That we place upon the records of this American Park and Outdoor Art Association an expression of our appreciation of the work that has already been accomplished toward securing the Dalles of the St. Croix as a forest preserved for the benefit of the citizens of Minnesota and Wisconsin where native plants and animals that are fast being exterminated may be perpetuated and where they and the remarkably varied and interesting geological conditions may be readily accessible to students, and we urge that these two states take early action to acquire the additional land that is necessary to preserve the reservation and the views in it from being marred by the destruction of any part of the forest growth and rock formation or by the introduction of any inharmonious objects.

We further direct our secretary to send to the executive officers of the states of Minnesota and Wisconsin a copy of this resolution.

This closed the business proceedings of the convention and at noon cars were taken to accept the

hospitality of the city of St. Paul. The afternoon was passed in visiting Como Park, partaking of luncheon, at which the city officials and the association exchanged compliments, driving through St. Paul's park domain, and bringing the excursion to a close at Indian Mounds Park, a locality bound up in tradition and reminiscence. The party returned to Minneapolis in the evening delighted with their experiences.

Saturday morning a visit was made to the Agricultural Experiment Farm, on the occasion of the annual meeting of the Minnesota Horticultural Society. This station is in charge of Prof. S. B. Green, and is allied to the Minnesota State University.

Saturday afternoon was spent most delightfully by a large number of remaining members and invited guests, in participating in the invitation extended by Mr. F. H. Peavey to make a steamer excursion on Lake Minnetonka and visit his residence, Highcroft, on that beautiful lake. The day was fine and the lake trip invigorating in every way, but the charm lay in Mr. Peavey's palatial home and its surroundings. The grounds occupying a knoll-like elevation of considerable extent, command a magnificent panorama of scenery, and are laid out to be artistically beautiful; broad lawns flanked and embellished by appropriate plantings, and the Italian garden, unobtrusive in a general sense, arranged to present its best features to the household, all combine to offer an example of the highest form of outdoor art in connection with a residence estate. Mr. Peavey's hospitality was a fitting climax to the Minneapolis convention of the American Park and Outdoor Art Association.

* * *

DELEGATES AND MEMBERS PRESENT.

L. E. Holden, Cleveland, Ohio; Lewis Johnson and wife, Sheldon W. Clarke and wife, New Orleans; Chas. Campbell, S. B. Armour, Geo. E. Kessler, August R. Meyer, Adriance Van Brunt, Kansas City, Mo.; Emil Durr, D. Erdman, Chas. Maengold, Christian Wahl, Mr. Reben, Milwaukee, Wis.; O. C. Simonds, E. A. Kanst, W. A. Peterson, C. J. Stromback, John W. Weston, PARK AND CEMETERY, Chicago, Ill.; Phil. H. A. Balsley, M. P. Hurlbut, Detroit, Mich.; Warren H. Manning, Boston, Mass.; John C. Olmsted, Brookline, Mass.; M. L. Moore, W. R. Hodge, Toledo, Ohio; Fredk. W. Kelsey, Chas. N. Lowrie, New York; J. W. Manning, Reading, Mass.; Frank H. Nuttall, W. G. Nye, Hon. Robt. Pratt, J. A. Ridgeway, C. J. Rockwood, Fred L. Smith, J. Staft, Chas. H. Wood, Wm. M. Berry, Harry W. Jones, Chas. M. Loring, William W. Folwell, Arthur W. Hobert, Minneapolis, Minn.; Geo. H. Hazzard, Fred Nussbaumer, R. M. Newport, J. A. Wheelock, St. Paul, Minn.; Geo. E. Blake, Mankato, Minn.; J. C. Doughty, Lake City, Minn.; E. J. Cornish, Omaha, Neb.; Edward J. Parker, Quincy, Ill.; E. L. Shuey, Dayton, Ohio; R. H. Warder, Cincinnati, Ohio; E. J. Fairall, Des Moines, Ia; Cyrus Peck, Newark, N. J.; C. F. Pilot, Sing Sing, N. Y.; C. B. Waldron, Fargo, N. D.

* * *

One of the interesting episodes of the convention week was a hurried trip to the interstate park about the Dalles of the St. Croix River. The natural

beauties and phenomena about this tract, render it of marked public interest, and amply justify the states of Minnesota and Wisconsin in providing liberally for a proper development and care of the scenery for the future benefit of their citizens. To Mr. George M. Hazzard the Minnesota Commissioner, whose guests we were, is due the credit for work so far done, and it is surprising that with the moderate appropriations at his disposal he has accomplished so much towards developing the salient beauties of this interstate park. It is well worthy of a special description in the near future.

ROYAL BOTANIC GARDENS, KEW, SURREY, ENGLAND, III.

Sir Wm. Hooker assumed the directorship April 1, 1841, the Garden then occupying about 11 acres. Successive additions were made, and in 1847, what was known as the "Pleasure Ground," containing 250 acres, was added. Throughout the 25 years term of Sir Wm. Hooker's office, the gardens' activity proved of utmost material beneficence, and gained for it a powerful influence.

The building of the large Palm House in 1848, was on the situation staked out 14 years before in the presence of King William IV; the Economic Botany Museums; the Herbarium virtually, and the Temperate House were started. In 1841 the visitors to Kew were 9,174, and in 1855 over 300,000 entered. In 1851, the year of the Great Exhibition, there were 327,900.

The desire to popularize the science of botany was ably conducted, and that it was encouraged is incidentally seen by the sale of descriptive Guides to the Garden, having passed through 13 editions of 2,500 each, within a comparatively few years. Donations were received from scientists, travelers, and others in all parts of the universe, and to properly care for these, new green houses were continually being erected. In 1855, the Succulent House (No. 5), an even span, 200 feet long, 30 feet wide and 15 feet high structure, was completed and even then the need of space specially adapted for tree ferns and conifers of the South Temperate zone was felt.

The museums were started in 1848, and within 6 years no less than 6,000 square feet of glazed cabinets were available for exhibiting the vegetable products serviceable to mankind. The timely provision of this museum was demonstrated by the interest manufacturers, druggists and merchants had shown in it. In 1855, another building with 13,000 square feet of mural glazed cabinets was added. Nothing of this character was ever attempted on such a comprehensive scale, and since its inauguration Kew stood unrivalled in this branch of science as it has ever since; the nearest approach at that time was the inmuseums principally devoted to woods and various products connected with Physiology and pure Botany at the Jardin des Plantes at Paris. The Kew Herbarium was founded by the private collection of Sir Wm. Hooker, brought from Glasgow, and to this the private herbarium and library of Mr. G. Bentham, that required nearly 35 years for collection, was added. At the death of Sir William, the Herbarium was estimated to contain one million specimens, counting all of the same plant from one locality as one.

Distinguished botanists from all parts of the world availed themselves of Kew's unparalleled resources, and large collections of correctly named specimens were profusely distributed.

A nursery was established at Kew in 1855, to supply trees to the municipalities, principally English elms and *Platanus acerifolia*, there having been previously no

perate House, in the pleasure grounds, was commenced, according to plans of Decimus Burton, the architect of the Palm House, the latter having been completed in 1848. The assistance Kew has rendered commercial enterprise in the British Colonies stands out as one of the most potent, direct and immediate influences exerted on natural development. As an illustration, the Cinchona may be cited. In 1861, the introduction into the West Indies of Cinchona trees was one of the most important and most interesting works of the Gardens. In India 8,000 trees were planted through the efforts of the Gardens, and provision for another large plantation was made.

The use of quin'ne as a febrifuge is well known. It is an alkaloid product of the barks of trees of the genus Cinchona, a plant confined in a wild state to a small area of the Andes, at an elevation of from 2,000 to 8,000 feet above the sea level, between latitude 10° north in Venezuela, to 19° south in Bolivia. When the curative properties became known, the forests were speedily ravaged, and in the case of *C. Succirubra*, which yields proportionally more of the best alkaloid than any other species which was then found in all the valleys opening in the Guyaquil plain, was later almost restricted to the western slopes of

Mount Chimborazo, on account of the reckless felling of the trees.

The extensive plantations in India prevented the extinction of the tree, and as for its product, Dr. King estimated that by the end of 1878-9, it saved the Indian Government £80,000 in purchase money, since quinine has been reduced in price, so that whereas it cost £5, to-day it only costs 1s. 8d. an ounce, but the price is now going up. A week or two ago it was 1s. 6d. per ounce.

In 1862 the plantation in India amounted to 117,706 plants in the Neilgherries alone.

Emil Mische.

(To be continued.)



THE PALM HOUSE, KEW GARDENS.

supply whatever for the Metropolitan Parks. In 1856, between 4,000 and 5,000 were supplied to the then new Battersea Park. Living plants and seeds came in even greater number, consequent to the energy expended with this purpose in view, and in 1855 the extensive collections amassed far exceeded the space conveniently available, and a large house, suitable for the accommodation of the larger and mature growths of Australian and New Zealand plants, was appealed for. In urging this grant, the Director well pointed out, in reference to living plants, that "a botanic garden is not valuable, as was once thought, in proportion mainly to the number of species of plants which it contains, but to their usefulness and beauty, and these ought to be a selection rather than a collection." In substantiation of this view, the genus *Ficus* may be instanced as comprising over 400 species indigenous to Africa and tropical Asia; a tropical weed, with but two species of special economic value, and few others of any ornamental character, most of its species are relegated, and properly so, to the Herbarium in dried state, where they can be studied by the botanist.

Kew has always been primarily a scientific institution, though largely employed as a recreation grounds. Sir John Hill published his "Hortus Kewensis" in 1768, and in 1789, Aiton published another work under the same title. Solander and Brown contributed subsequent editions, and the exquisite botanical drawings of Francis Bauer prove this beyond question.

Among the distinguished botanists studying special subjects at Kew, Dr. Englemann, of St. Louis, was engaged with Cacti and the genera Euphorbiaceæ and Cuscuta. In 1861, the new "Winter Garden" or Tem-

A PLANTING CHART OF GARDEN PLANTS.

This little plan is intended as an appendix showing a simple gardenesque arrangement of the plants mentioned in the series of papers entitled, "Garden Plants—Their Geography," now being published in "PARK AND CEMETERY." It is I hope clear enough to be understood by anyone acquainted with plants and practical gardening, or desirous of becoming so.

The key to the groups was given in our issue for September 1895, page 111, which is repeated on next page for the sake of convenience:

Hints as to arrangement are often given in the papers alluded to, and will be continued from time

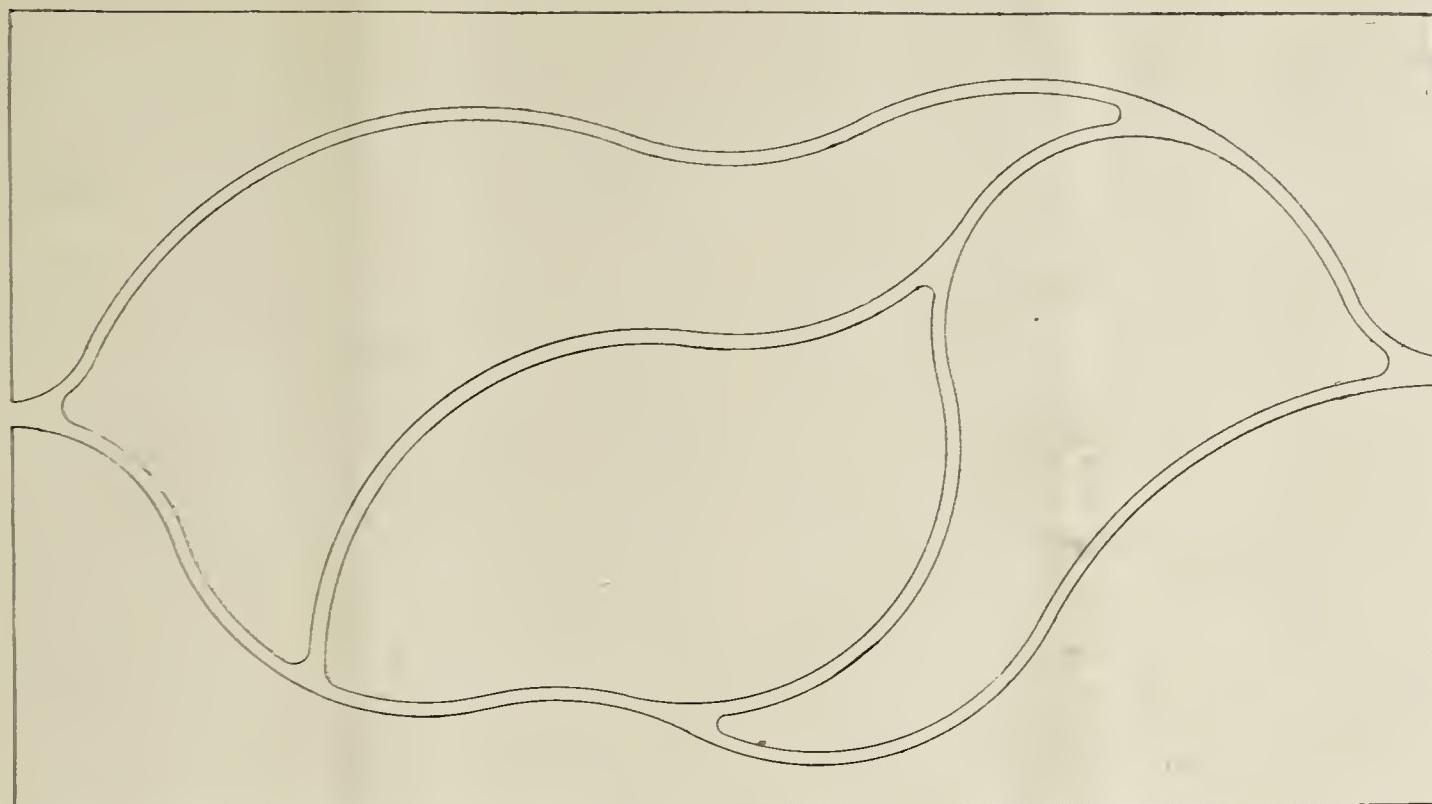


FIG. 1.—A Grass Field with Finished Main Roads, which may be pegged for the following Design, FIG. 2, more rapidly than it can be drawn on paper

KEY.

1 Ranales.	12 Myrtales,	23 Polemoniales,	34 Abietinæ,
2 Parietales.	13 Passiflorales,	24 Personales,	34a Cupressinæ,
3 Polygalales.	14 Ficoidales.	25 Lamiales,	34b Taxinæ.
4 Caryophylales,	15 Umbellales.	26 Chenopodiales.	35 Orchidales.
5 Guttiferales,	16 Rubiales,	27 Podostemales.	36 Narcissales, a.
6 Malvales.	17 Asterales,	28 Asarales.	37 Liliæ.
		29 Piperales.	38 Palmates.



FIGURE 2.

Copyright 1898, by James MacPherson.

7 Geriales,	18 Campanales.	30 Daphnales.	39 Arales.
8 Olacales,	19 Ericales.	31 Santalales.	40 Potomales.
9 Celastrales,	20 Primulales,	32 Quernales, a. b.	41 Glumales, a.
10 Sapindales,	21 Ebenales,	33 Salicales.	42 Filicales.
11 Rosales, a, b,	22 Gentianales,	34 Coniferales,	

to time. It is only necessary to observe that the plan is an elastic one, for although certain features are absolute, the aspect and arrangement in whole and in detail must necessarily vary with every zone and every piece of ground.

The Polypetalous groups run from left to right around their lawn, as do all others, and are embraced in the numbers from 1 to 15. Monopetaleæ from 16 to 25. Apetalæ from 26 to 33. Gymnospermous Coniferales 34 to 34^b. Endogens from 35 to 41^a, and Ferns and their allies 42.

Building and other sites are reserved in the shelter belt of Conifers, (which may be much thickened;) at S. for stables; at M. for a small museum, a garden herbarium, a library and offices; at P. P. for porters lodges for under gardeners, etc.; at C. for a curators house; and at N. G. for a nursery and propagating house. Appraches and paths may be formed as needed. The roads are 33 ft. 4 in. wide.

Norway spruce, Hemlock spruce, Arbor-vitæ's, Yews at southern points, and the deciduous conifers may be used for nurse plants, and for hedging purposes around the margins.

A park or garden such as is indicated ought not to cost more than from four to five thousand dollars for hardy material. The fine trees are rarely duplicated except perhaps in the case of conifers which, with Nos. 1 and 19, may be made the most expensive groups. If farm lands were employed the whole primary cost could be kept small. Maintenance is the all important consideration for such a planting, for it is no pie-bakers or cigarette-rollers institution, and the further fussy politicians keep from it the better.

Annual grants supposably obtained through such people are the fashion, but an endowment fund would be far more satisfactory.

Millionaires are given to donating college buildings and battle-yachts, but they might better immortalize themselves by establishing such parks and gardens as are indicated, affording all the people an opportunity to learn things as well as words.

In the next issue will be given a list of plants as a suggestive planting for the design.

Trenton, N. J.

James MacPherson.

APPRECIATION OF NATURAL BEAUTY.*

If people could realize and enjoy the beauty around them, they would be happier and better, and the earth would gradually improve in appearance. They would see with pleasure the brightening tints of the willows and dog-woods that come with the first warm days of March, and the tinge of brown caused by thousands of blossoms which a little later show in the distance the graceful shape of the elm, then the reds and yellows that mark the place of the maples, and the varying

*Paper read at the Minneapolis convention of the American Park and Out-door Art Association. By O. C. Simonds, Chicago.

shades of green as every gain in warmth and sunlight pushes out the young leaves from the swelling buds. They would note that the colors of spring are almost as varied as those of autumn. The little velvety leaves of the white oak are worth going miles to see when in May they hang like half-open umbrellas from the ends of the branchlets and range from yellowish white through pink to the deepest purplish red. At the same time, the large yellow buds of the shag bark hickory with their red bracts are as showy as most flowers. There is also a wonderful wealth of beauty in our native thorn and crab apple trees with their spreading shapes, their varying shades of foliage and their profusion of blossoms. Later still other members of the rose family, the spiræas, raspberries, blackberries, and the wild roses themselves supply bloom and color. Although during the latter part of summer and through the autumn months, our trees and shrubs do not produce flowers in abundance there are nearly always some to be found until those of the witch hazel remaining as a yellow mist after the golden leaves have fallen, fill the November air with perfume. Before the blossoms of May are gone, the seeds of the elm and soft maple are already ripening and from that time on the fruits of trees and shrubs add to the interest generally felt in the summer and autumn foliage. Not only do the flowers, leaves and fruits please us with their thousand shapes and colors, their surfaces sometimes smooth and glossy, sometimes dull and soft, but the trees and shrubs themselves, by the manner in which their foliage is massed, by their effect when seen close at hand or in the distance, when seen in sunshine or mist, in a still atmosphere or in a breeze, by daylight which brings out every detail or silhouetted against the night sky, help to make that wonderful variety and beauty which must surely be appreciated by all who expect to feel at home in the next world. There is time merely to allude to the humbler forms of vegetation, the grasses and herbaceous plants that cover the earth so attractively, to the clouds that should be admired by each of us as much as they were by the poet Shelley, and which should be given a place in every design, to the varying shapes of ground surface, to the far reaching seas, and to the running brooks and placid lakes with their rocky or leafy margins.

Probably each of us could give illustrations showing how people fail to get the most out of life through inability to see such things as I have mentioned. Some one who attended our meeting last year, and who lived in Kentucky where the tulip tree grows to perfection, had never before seen its blossoms. In another state an enthusiastic board of Park Commissioners commenced their operations by clearing away all the undergrowth, denuding the steep hillside as well as the valley. A glance at the adjoining land showed dozens of groups of magnificent specimens of the prairie rose. The commissioners acknowledged the beauty of this growth when it was pointed out to them, and also their own mistake in having destroyed similar bushes, and they were quite willing to let the steep bank become recovered with the wild grapes and roses, lindens and thorns which were already sprouting from the surface after having been cut away by the caretaker's scythe. This effort of nature to clothe herself in an attractive garb had also been unnoticed till attention was called to it. The practice of cutting away the undergrowth on the part of those who start out to make improvements is one of the most common sins committed against outdoor art. Many

have not learned that children, whether of men or trees, do as much as their parents to make the world attractive and fit to live in. The young growth of vegetation is not only beautiful with its large leaves and vigorous shoots but it is a protection to the older trees by checking the drying winds and holding the natural mulching of leaves. A farmer in a district of Michigan where there is plenty of land, had near the roadside perhaps an acre that was low and wet. It supported a rank, beautiful growth. For a background there were many young, white pine trees about twenty feet high, covered to the ground with dark, bluish green needles. A few native larches interspersed here and there lightened up the autumn picture with their old gold leaves. Flanking the group on either side, were most perfect specimens of red maples while in front along the fence and almost hiding it were masses of Carolina roses with their shining red fruits and, brighter still, groups of winterberry bushes with their holly like berries. These were mostly scarlet, so intense as to attract ones attention from the brow of the hill on either side but there were also a few of the orange colored variety. You can imagine my disappointment when on looking for this place one spring, I found that all the trees and bushes had been cut down. Later in the season a fire destroyed every vestige of green that was left, and the area has remained a barren, blackened waste ever since. If the farmer who owned this bit of roadside beauty and who could see it nearly every day, had derived half as much pleasure from it during the year as I did during the half dozen times I passed by it, he would have taken his winter exercise in some other way. Often a desire for physical exercise during the long months of winter, is the only excuse I can think of for the mischief that is done, since, as in the case just given no use is afterward made of the denuded land. Near a large eastern city, lived a well-to-do citizen, who had along the front of his land a belt of natural growth, including sumachs, witch hazel, red buds, dog woods, viburnums, wild grapes, and roses, virgin's bower, golden rod and asters. A landscape gardener who lived still farther from the business centre told me that it gave him the greatest pleasure to see this graceful, irregular, natural, growth, and that he felt it a personal loss when he found one day that the owner had just had it all cut down. Strange as it may seem this owner applied to the landscape gardener for advice as to what shrubbery he should plant along the roadside. He was told by the latter that it would take at least ten years to produce an effect as good as that which had just been destroyed. A man in the suburb of another city built a house costing seven thousand dollars, and then decided he would spend twenty-five dollars on his grounds. A man will often spend several hundred dollars for a painting, and then be quite indifferent to the views from his windows.

Such cases and many more that might be given show a failure on the part of many to appreciate natural beauty; a failure to get that keen enjoyment that comes from seeing clearly and truly the things that an artist would like to paint. The ability to see in this way is not wholly born with one. The blindness, if I may call it such, is due as much to lack of proper surroundings and suitable training as to heredity. This is shown by the fact that many learn after reaching maturity to see new beauties in things with which they had been surrounded all their lives but had never truly seen. They gradually learn to admire a landscape even in winter,

when they had supposed all outdoors was dreary. We need more men like Mr. Strauch who used to go about with his mirror to show the exquisite landscapes he had helped to create; more men like Mr. Stiles whose death during the past year seems like a personal loss to many of us since he was one of the best of teachers; more men like Mr. Olmsted to help add to our enjoyment by making us sensitive to landscape; more men like Mr. Cleveland to tell us how to make our parks and cities; and we, also, need more women like Mrs. Van Rensselaer, Mrs. Robbins and Mrs. Seavey to help with their criticisms and suggestions.

Prof. McBride told us that a beautiful country made people patriotic. A man, he said, would love his country if it was attractive and he gave examples to prove his statement. I believe that to love trees and shrubs, and open fields, birds and flowers, rivers, lakes and skies makes a man unselfish. He wishes others to enjoy that which he values so highly. It makes him have at heart the true welfare of his country, the happiness and contentment of its citizens. He looks forward perhaps for generations to when some of the trees he has planted will reach maturity. He wishes the land to remain fertile and the climate suitable for the welfare of his friends—the trees, shrubs and flowers. He does not like to see the forests disappear, the rivers dry up, and the vegetation suffer from drouth.

If people could see and appreciate the beautiful things about them the world would grow better looking because they would seek to have these things around their homes, to make them a part of their homes in fact. They would try to secure the broad lawns or meadows, the water views, the distant skies and these landscapes which they might not have room for at their city homes by establishing generous parks. They would gradually obliterate the scars which the railways have made with their cuts and fills by covering the bare spaces with verdure. They would reduce the amount of smoke that pollutes the air. They would make our roadsides one continual source of delight. Farmers would learn that bits of woodland are not the least profitable part of their farms. The hideous signs that now mar or obstruct many a charming vista would disappear. People even in the United States would in time learn to take as much pride in the appearance of their country as the Englishman takes in his.

While we are often grieved by the destruction of trees, shrubs and scenes that have gladdened our hearts, there is ground for encouragement in the fact that every year more parks are established and every year more people seek the country to get its scenery, its pure air, its strength, and its vitality. Much good is being done by the camera, the quantities of well illustrated books and newspapers, and especially by the study of art to which increasing numbers every year devote themselves. Let us hope that our association may aid in this movement for better things, that it may lead our people in their efforts to secure more beautiful homes and surroundings, that it may open our eyes until, by and by, we shall have a Heaven on earth, and that men will learn not to wait until they are ready to die before they begin to really live.

The Sanitation Committee of the Board of Trade of Jacksonville, Fla., contends that the hyacinths in the river absorb the foul gases that escape from the sewers. From all accounts the plant absorbs more than gas.

GARDEN PLANTS.—THEIR GEOGRAPHY, XXXI.

RUBIALES.

THE SAMBUCUS, GARDENIA AND GALIUM

ALLIANCE.

(Continued.)

Bellis "The Daisy" has 8 or 9 species in the northern hemisphere. *B. perennis* the British daisy so beautifully sung by Burns is often ill at ease in Atlantic States. I have known it naturalize on lawns in the lake regions however, and it is said to do well in southern California, which is another of the remarkable things we hear of that wonderful climate.



BRACHYCOME IBERIDIFOLIA.

B. integrifolia is a native from Kentucky southward to Texas. *B. rotundifolia* var. *cœrulescens* is the blue African daisy. *B. sylvestris* is a white flowered Mediterranean kind. Why not get the species together and try to hybridise them?

Boltonia has 12 species from northern and subtropical Asia and North America. A few are in gardens.

Callistephus, "China Aster," is a well-known monotypic plant of great beauty in its original form, found in Asiatic countries, and immensely varied and doubled in cultivation.

Aster "Michelmas Aster," has between 250 and 350 species and forms distributed over America, Asia, Africa and Europe. The genus now includes a good many plants formerly known as *Chrysocoma*, *Lynosyris*, *Bellidiastrum*, etc. *A. Palmeri* is a shrubby species of 3 or 4 feet high found in southern Texas. *A. ptarmicoides* var. *lutescens* has pale yellow rays. *A. lynosyris* is the English "goldylcks," or one of them! A good deal of attention is given these plants in Europe and deservedly. They are mostly among the last flowers of a season, and are in handsome shades of whitish or purple.

Olearia is the popular "musk tree" genus. They are trees and shrubs in about 85 species from Australia and neighboring islands; several are cultivated on the mountains of India, Algeria, the south of England, Southern California, and similar nearly frostless climates. *O. argophylla* has beautiful wood with a twisted and figured grain, a good deal used by the Colonial cabinet-makers.

Commidendron and *Melanodendron* are I suppose some of the St. Helena trees of the tribe, but I have never met with them in cultivation.

Celmesia in 25 species are lanate herbs or sub-shrubs from Australia and New Zealand. They have handsome purple or white daisy like flowers; but

OLEARIA LYALLI.—*Gardener's Chronicle*.

their seeds have proven difficult to germinate and probably soon lose vitality.

Erigeron is a large genus of 110 species, American largely, but with species distributed over the temperate and cold regions of the old world. Perhaps a couple of dozen are known in the best botanic gardens.

Microglossa has 8 species in Asia and Africa. Several are shrubby and the Himalayan *M. albescens*, is sold as *Aster cabulicus* in European nurseries.

Chrysocoma has 8 species of low growing frutescent evergreens from South Africa with white or yellow flowers.

Baccharis is a large genus of shrubs or herbs all North or South American. *B. halimifolia* a species of the Atlantic coast lands is one of two or three woody plants of the Alliance known to northern gardens. The small yellowish white flowers are inconspicuous and dioecious, and the fertile plants are alone worth growing for their abundant silvery papus to which the plants owe their name of "groundsel trees." *B. salicina* and *B. angustifolia* are woody kinds from the south and southwest, and several are found through the arid regions westward

BACCHARIS HALIMIFOLIA.—*Vick's Mag.*

toward the Pacific coast, which grow from two to fifteen feet high.

Trenton, N. J.

James MacPherson.

THE INFLUENCE OF PARKS ON THE CHARACTER OF CHILDREN.*

As the infirmities of age deprive me of the pleasure of taking an active part in the exercises of the convention, I have been asked by my friend, Mr. Loring, to prepare a paper for the occasion, which he has kindly offered to read.

I recognize the propriety of the demand in consideration of the part I have taken in the construction of numerous parks in various cities of this country, but I feel a timidity in speaking on the subject for two reasons; first, that I have preached so long on the same theme that I fear I may tire you with a repetition of old sermons, and secondly, that I have been so long out of the world that I know nothing of the present state of the Art, the practice of which was my chief source of interest and pleasure during my active years. Therefore, if my words fall upon your ears like "a voice from the tomb" I can only promise it shall not utter a "dolesful cry," but rather a voice of glad thankfulness that I have been permitted to aid in the construction of works, here and elsewhere, whose value to the health and happiness of countless generations is beyond estimate.

Whatever new devices may have been contrived to increase the attractive interest of the Parks of any City, the grand principle remains unchanged, that they must be founded on a love of nature, and their object is weakened or defeated by the introduction of artificial decorations which conflict with natural laws. Do not understand me as saying that I would exclude works of art in scenes where they are appropriate to the adjacent surroundings. On boulevards, for instance, which are lined with residences whose architectural elegance is enhanced by the presence of trees and shrubs, and flowers and grass, the introduction of statues and artistic fountains is appropriate, and it is equally so in those portions of the park which are expressly intended to afford entertainment to crowds of visitors. But the primary object of all parks is to give to the citizens, whose lives of necessity are passed in the din and throng

of the streets, the occasional relief of the quiet seclusion of rural scenes from which artificial decoration is excluded. And this to man becomes the more onerous from the modern tendency toward city life, and the excitement attendant upon the pursuit of wealth.

It seems to me that few people fully realize the value of parks for children, and above all for the children of the poorer classes. The rich man may have his country seat, or his summer residence by the sea shore or in the mountain, but think of the great mass of the laboring population whose children are growing up to fill the places of the present population, and many of whom may be the rich men and the rulers of the future. We claim it is the chief blessing of our country that its highest offices are open to all classes alike, but does not that fact carry with it a responsibility we have no right to shirk? It is a sufficient answer to my question to point to our free schools and the obligation of every parent to send his children to them unless his means enable him to educate them by a more costly method. But it is needless to cite examples, our own history furnishes, to prove that the most important part of every man's education is acquired out of school, and the inequality of the advantages of the different classes in the opportunities afforded them is too obvious to need pointing out. Can any one doubt the value of parks in the education of children who are born and bred in crowded tenement houses which are the (so-called) homes of thousands of the inhabitants of every city? I do not, of course, presume to say that the evil influences to which they are exposed can be wholly counteracted by the contrast afforded by scenes of natural beauty. But long and careful observation has served to convince me that the effect upon the mind of a child is such as can hardly be imagined by any one who has not carefully observed it. I was first led to reflect upon the subject many years ago by observing a man who was leading a cow in the streets of New York. He had brought her by steamboat from some point on the North River and, as he told me, was taking her across the city to ship her on one of the Sound boats. She was a beast of rare blood and beauty and the attention she excited led me to follow her. As she passed that classic locality known as Five Points a shout was raised by the host of little gutter snipes who swarmed the street and trooped after her with wonder and delight. A casual observer would probably only have laughed at the spectacle, but it seemed to me to have a deep significance. "Here," said I to myself, "are thousands of children whose lives are passed amid the scenes of squalor and vice. They have never seen anything more attractive, and the sight of a cow being led quietly through the streets is to them an amazing novelty. What would be their emotions if taken into the country and allowed to compare the beauty of nature with those of their daily surroundings? How few of us realize that every one of those wretched little ragamuffins is growing up either to be a blessing or a curse to the community; he may prove a benefactor to his race, or he may become a thief or a murderer. Much depends upon the impressions he receives in the years of his childhood, and is it not a peremptory duty devolving upon us to let him see that life has something better to offer to him than such misery as is his daily lot?"

Need I say more? Is it not obvious that the parks of a city are as essential to its moral health and vigor as the vital organs of its inhabitants are to every individual?

*Paper read at the Minneapolis Convention of the American Park and Outdoor Art Association. By H. W. S. Cleveland, Chicago.

PARK AND CEMETERY.

PLANT PROPAGATION FOR PARKS.*

The subject of Plant Propagation for Parks is one which is often brought before park officials for consideration, there being so few parks throughout the country so well supplied with native trees and shrubs that none need be procured. In the majority of parks, and especially small ones, it is usual to obtain plants by collection from the surrounding country, or by purchase from nurseries. In larger parks, where thousands of plants are required, it is very essential in order to obtain the best results, as well as from an economical standpoint, that a park nursery be established where such trees as the Elm, Oak, Ash, Linden, Negundo, Birch, Maple, etc., may be kept growing in a healthy condition until such time as they may be needed. These trees when young can be purchased from nurseries very reasonably, and when in nursery rows they can be had at any time they are wanted, thus saving delay, as the seasons of planting are usually so short. Another advantage is that the trees will have become acclimated. But the principal object of a park nursery is to furnish quickly and in large quantities such varieties of trees, shrubs and plants as will be mostly used in the plantation,—such as Spiræas, Cornus, Ligustrum, Philadelphus, Ribes, Symphoricarpos, Lonicera, Poplars and Willows. These with many others may be readily increased from cuttings obtained from plants already about the park, collecting or by purchase. A place for these cuttings should be prepared early in the winter by covering a piece of ground with spent horse manure, or leaves, to keep the frost out, sandy places being the best for the purpose. Cuttings should be taken in the winter and cut to about ten inches in length. The old tough wood does not root easily, therefore cuttings taken from young ripened wood are preferable. Put the cuttings in the prepared ground. The leaves or manure can be removed as fast as space is wanted for the cuttings, and after the cuttings are in place the manure or leaves can be put over them to prevent hard freezing, as it is necessary to keep all the vitality in the cuttings.

The planting of the cuttings into the nursery should begin when the heavy frost is over, or about the 15th. of April, when most of the cuttings will have calloused in their winter quarters. A suitable piece of ground for the nursery can usually be found in some uncompleted portion of the park. The ground should be well plowed and pulverized and ample provisions made for water. Cuttings should be planted in rows running north and south, so that the sun can penetrate between the rows, as they make better plants and grow straighter than if planted east and west.

For park purposes cuttings may be planted from 12 to 14 inches between rows and from 6 to 8 inches in rows, or about 50,000 to the acre. One man with a good hand cultivator can attend during the summer about 100,000 plants. At one year old cuttings will have grown into fine plants ready for use in the plantations, and when planted at one year old the cost is very little compared with what it would be if the plants were allowed to grow another year or two in the nursery. They are easy to handle and only a small hole need be dug to insert the roots. In plantations where the ground is soft as it should be one man can plant about 500 per day.

The raising of their own plants, as before described, has been practiced by the South Park Commissioners

for the past years and over 400,000 trees and shrubs, all grown in this way, are now planted in different parts of the park and all in fine condition. There are also 150,000 cuttings, which were made last winter, growing in the nursery at the present time which will be ready for next spring's planting.

STREET TREES.

The very excellent article on page 64 on the above subject suggests another phase which, so far as I have observed, has not been treated in this series. I refer to the practice of planting what are known as "pole trees." These trees are usually contracted for with the nomadic tree planter and tree agent. They are usually dug by this person from groves of slender young saplings in the outskirts of the forest. In setting them on the street their character of stem, top and roots are such as to call for radical transformation. This change is brought about by lopping off the entire top, which reduces the tree to the form of a pole—hence "pole tree." While the removal of the top very often saves the life of the tree it is a practice that should be discouraged, especially with bushy topped trees like hard maples. Why is a pole tree inferior to one headed back to a reasonable extent? (1) For the reason that the young branches making the new head are forced out near together at the extremity; (2) these crowd each other in a few years causing decay and the final breaking down of the head in part or whole. In addition, heart rot is often induced by the wound made in removing the top. To substantiate these statements one but needs to look at the street trees in many of our cities. It is true that the natural spreading habit of the elm tends to overcome the defects encouraged by this system, but the same misfortune also often overtakes this noble tree. The mistake that lies at the root of the matter is in the selection of forest-grown saplings. These are entirely unsuited in every way. The nursery grown and transplanted tree is a better tree, will transplant with greater success and without the necessity of severe heading back. Let us discourage the pole tree; let us plant trees symmetrical and well grown.

Ithaca, N. Y.

John Craig.

CORRESPONDENCE.

A correspondent asks: In case a party agrees to purchase a lot in a cemetery, buries upon it, and then refuses to pay for the same, what method can the Cemetery Association adopt to get possession of the lot?

There has been much unfortunate experience in this direction, in which many superintendents have participated. What they have done under the circumstances and its results would be instructive. [ED.]

*Paper read at Minneapolis Convention of American Park and Outdoor Art Association. By Fred Kanst, Chicago.

* PARK NOTES. *

The Audubon Society in Chicago has recently, in conjunction with the state game warden, secured a decision against the wholesale capture of native song birds for the purpose of supplying the Chicago bird market. The societies interested in the protection of birds were represented by counsel, and a decision was given declaring the trapping of the birds illegal. A large number of birds were seized by the warden in one of the stores to make the test case. An appeal was taken, but the case is an important one for the traffic is much more extensive than would be supposed.

* * *

The decision of Judge Hebbard that the members of the Italian Cemetery Association have no title to land in the San Francisco City cemetery, means, says the local press, transformation of that tract sooner or later into a park. It originally consisted of 200 acres, but some 60 acres on Point Lobos was bought by the government for fortification purposes. The remaining 140 acres slopes to the east and has a warm south and east exposure. It is proposed to urge the government to purchase the whole tract and make a military park about the fortifications, but in any case it will ultimately become a park.

* * *

The movement to open the grounds of the public schools in the summer for playgrounds for the neighborhood children is assuming practical shape, and several of the Chicago schools have been opened for that purpose. More than this it is intended that the basements and one room shall be devoted to kindergarten classes and nature study, all of which is indicative of the trend of the times. New York City has also entered this field of community improvement, and has provided ample means for play in the school grounds set apart, besides well appointed educational features. Tent playgrounds have also been erected in the public parks and other convenient locations.

* * *

The annual report of the Park Commissioners of Milwaukee, Wis., for the year ending March 4, 1898, shows total receipts for park purposes to have been \$212,995.94. The expenditures were \$110,893.51, divided as follows: Regular pay rolls \$9,621.96; labor on parks \$28,770.69; expended for improvements, material, etc., \$72,500.86. Deducting these amounts from receipts leaves the sum of \$102,102.43 for the current year's work. A large amount of improvement work was carried along in the seven parks of the city, which included two large steel arch bridges across the ravines in Lake Park costing complete \$36,376.47. There were some 400,000 small trees and shrubs imported from foreign growers and planted in the parks nursery. Last fall 50,000 spring flowering bulbs were planted in the grass in different parts of Lake Park.

* * *

The following note on the carriage roads in Berlin carries with it some suggestions relative to cost and durability of asphalt paving. According to Consul General Goldschmidt the area of carriage pavements in that city is 6,500,405 square yards. Of this a fraction less than 74 per cent. is stone pavement, about 25 per cent. asphalt, and a fraction over 1 per cent. wood pavement. The proportion of asphalt is steadily increasing. The soil consists of coarse, gritty sand, forming apparently an excellent foundation for the heavy eight-inch layer of gravel and cement, over which the two-inch covering of asphalt is spread, making a strong and durable pavement. The average price of asphalt

pavement in Berlin is \$2.80 per square yard. The city government grants the contracts for laying the pavements, and also for keeping them in repair for twenty years, the first five years without extra compensation, and after that for an annual compensation of 10 cents per yard.

* * *

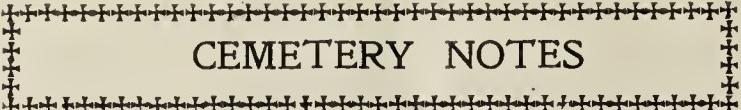
It is interesting to note in connection with the large number of Improvement Societies springing up over the country, the various lines of work which appear to have had an influence on bringing about their organization. In a number the embellishment of the town in the way of squares and small park areas is prominent; in others the care of trees and the promotion of tree planting; in others the cleaning up of the town, getting rid of waste paper and other unsightly refuse; while in others educational effort stands out, looking to the instruction of the school-children in good citizenship and the love of nature. Combinations or modifications of these points in full or in part, together with many others which will suggest themselves, form a basis for improvement work in every community in the country. Where progress is the watchword, there is always work to do, and an active improvement society is one of the most potent factors in the welfare of a community.

* * *

In some notes on a preliminary visit to Hubbard Park, Meriden, Conn., addressed to Mr. Walter Hubbard, by Olmsted Bros., landscape architects, Boston, occurs the following practical suggestion: Hubbard Park is a tract of some 700 acres comprising some beautifully wooded, rugged scenery, over which the ruthless woodcutter has committed depredations. "It would be an enormous advantage to the future beauty and interest of the park, however, to gradually and continuously improve the character of the woods with a view to bringing them into a condition resembling that which they would have had if no periodical wholesale cutting for fire wood had been allowed. The best way to accomplish this desirable end would be to employ on a salary a well-educated forester of artistic temperament whose principal work would be the marking of trees, mostly of course, of the less desirable varieties, which would be cut and removed during the winter by a small gang of skillful men to be selected from among the laborers regularly employed on the park. The wood cut ought to sell for enough to at least partially defray the expense of improving the quality and picturesqueness of the woods.

* * *

A correspondent writes of the Arnold Arboretum, Boston, in a recent issue of the *Florists Exchange* as follows: This is rose week here, and 2,000 different varieties and colors, from all sections of the temperate zone, may to day be seen in flower. Every day sees new and rare specimens blossom forth, showing some gorgeous colorings, and visitors may now see all shades, from the purest white to the deepest crimson, and all varieties, rock roses, Scotch and Alpine roses, and Japanese roses, following each other in rapid succession and presenting a sight unequaled in the locality. Great credit is due Mr. Jackson Dawson, who reigns over this place, and it must be a source of great satisfaction to him. Rhododendrons, with their rich colors, vie with the roses in popular favor, and it must be said that they attract a great deal of attention and commendation. The heather has begun to bloom, and the snowballs, in great clumps, present a pretty scene, completely loaded down as they are with bloom. The Arboretum has had an addition of 75 acres to it, for which plans are not yet complete, but where it is expected that more than 10,000 varieties of trees, plants and shrubs, which are now being started in the nursery, will be set out. It is expected to have this done in another year.



CEMETERY NOTES

The 50th anniversary of the consecration of Forest Hills cemetery of Boston, Mass., occurred late in June, and the occasion was appropriately observed. The celebration took the form of special floral decorations on the central plots and individual lots. An exchange says the 204 acres never looked more beautiful, and the superintendent and the gardeners surpassed all previous efforts in this direction.

* * *

The will of the late Hannah E. Bigelow of Marlboro, Mass., contained among many others the following public gifts: The city of Marlboro to have the use of the income on \$1,000 for the purpose of shade trees for the highways, parks and cemeteries in this city. The Marlboro public library \$5,000 for the purchase of books for its use. The town of Berlin receives \$2,500, the income of which is to be used on the maintenance of private burial lots as designated and the care of cemeteries in Berlin and near vicinity.

* * *

The twenty-first annual meeting of the stockholders of Magnolia cemetery, Charleston, S. C., was held June 17th. Since Magnolia cemetery was organized, nearly half a century ago, 2,700 lots have been sold, as well as 1,205 single graves. The first interment was in 1848 and the number of interments to June 1, 1898, is 10,150. The total sale of lots amounts to \$181,115, and there has been expended on improvements a total sum of \$120,000. The trust fund has reached \$37,874. About 100 lots have been put under perpetual care the fund for which amounts to \$27,454.

* * *

The criticisms on the condition of the burial plot at Key West in which repose the remains of 24 victims of the "Maine" tragedy, has had a prompt response. Encampment No. 69, Union Veteran League, Washington, D. C., took the matter up and over \$500 is now in hand towards providing and erecting a handsome iron fence about the graves of the nation's heroes. It is also intended to similarly protect the graves of the dead of the torpedo boat "Winslow," near by the "Maine" enclosure. Several other projects are on foot to appropriately commemorate the fallen in the cause of Cuba at Key West.

* * *

Paxtany Cemetery, the new cemetery for Harrisburg, Pa., situated close to the old historical Paxton church on the Paxtany Ridge, about one mile from the city limits, is under way. Some 45 acres have so far been acquired for use. It is beautifully situated, commanding magnificent views, and is finely adapted for a high order of landscape work. It is organized on the lawn plan and will be conducted under modern approved practice. A comfortable office and waiting room are under contract, as well as wrought iron entrance gates with four stone pillars. All the avenues will be macadamized. Bellett Lawson, Jr., is secretary and comptroller.

* * *

In the course of an address largely devoted to simplicity in funerals, delivered at the opening ceremonies attending the dedication of Druid Ridge cemetery, Baltimore, the Rev. Madison C. Peters of New York, said: "To do away with the excess of flowers, and above all, with crepe veils, is what we want. Fashionable mourning is the greatest possible satire on grief. It expresses hopelessness instead of faith. In New York I have seen mourning put on dogs and the coachman is also dressed ridiculously. If you have flowers give them to your friends while they are alive. Avoid all unnecessary display and expense. De-

liver me from funeral addresses. The worse a man is the more good you have to say about him. It brings ridicule upon the church."

* * *

Speaking of the traditions and prejudices for long held regarding the position of the body when laid in the grave, an exchange says: Probably few people know that there is a choice side to every cemetery. Thus, in some parts of the world, the eastern portion without regard to its situation, is always deemed most desirable. This preference arises from the old tradition that our Lord will appear from the east. It is also believed that the dead in the eastern portion will be the first to rise; then those in the southern, western and northern, in order. In England it was once the custom to bury felons and other bad characters on the north side of the church. The custom of laying the dead in a certain direction is responsible for the Welsh designation for the east wind: "The wind of the dead men's feet."

* * *

The new West Park Cemetery, Cleveland, O., for which the Board of Control awarded contracts for improvements the past spring comprises nearly ninety acres at the intersection of Ridge avenue and Big Creek, of remarkable natural beauty. The thirty-eight acres under contract is laid out in twenty-three sections arranged some for private lots only, some for single graves and others reserved for vaults and mausoleums. The city has endeavored to rival the best private cemeteries in the design and arrangement of its planting plans. If the plans of William H. Evers, a local civil and landscape engineer, are carried out, West Park lays claim to be the first city cemetery, controlled by city government, laid out according to modern landscape ideas, and the lawn plan.

* * *

Mr. Bellett Lawson's progress in the development of "Grandview" cemetery at Wilkesbarre, Pa., is attracting the general attention of the locality to the possibilities of improving the wonderful natural features thereabouts. "Grandview" overlooks the city and controls magnificent views of the Wyoming valley. The area was very rough, and was originally covered with splendid timber, which had been cut and slashed for mining purposes. Some 1,500 stumps had to be removed which was done by dynamite, charges in 50 stumps being fired at one time. Numbers of growing trees have been sacrificed which caused considerable comment, but the effects rapidly being demonstrated has changed the tone. Great interest is shown in the proceedings, and sentiment is being revolutionized in the vicinity in regard to landscape work. "Grandview" promises to be an educator for a large area of country.

* * *

The Druid Ridge Cemetery, Baltimore, Md., was dedicated with appropriate ceremonies on June 11th. It is situated about nine miles from the city, directly on the Druid Ridge, near Pikesville, and is accessible in several ways. The land was acquired by several prominent business men of Baltimore and New York for a cemetery on lines in keeping with modern ideas of hygiene. The ground selected possesses peculiar advantages for cemetery purposes, a system of natural springs affording facilities for an artificial lake and other water requirements. No lot inclosures of any kind will be allowed. Upon the property is a dwelling, a portion of which has been furnished for the use of lot owners and officers. There is under construction a public mausoleum, built of granite, containing 138 catacombs situated on a knoll commanding a view of the entire cemetery. Its interior will be decorated in marble and it will have Mosaic floors, stained glass windows and Italian marble catacombs. The cemetery will be conducted on the most approved practice.

Association of American Cemetery Superintendents.

G. W. CREEZY, "Harmony Grove," Salem, Mass., President.
ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., Vice-President.
F. EURICH, Woodward Lawn, Detroit, Mich., Secretary and Treasurer.

The Twelfth Annual Convention will be held September 13, 14, 15, at Omaha, Neb.

The American Park and Out-Door Art Association.

CHARLES M. LORING, Minneapolis, Minn., President.
WARREN H. MANNING, Tremont Building, Boston, Mass., Secretary.
E. B. HASKELL, Boston, Treasurer.

The next meeting of the Association will be held at Detroit, Mich.

Publishers' Department

Park Commissioners and Cemetery trustees are requested to send us copies of their reports.

Photographs and descriptive sketches of interesting features in parks and cemeteries are solicited from our readers.

Notice to Cemetery Officials.

At the last meeting of the Association of American Cemetery Superintendents a committee was appointed for the purpose of making a selection of papers read at all previous meetings and of publishing the same in book form. This compilation of papers will be ready about Aug. 15th, and will provide a most valuable book on cemetery development and management. The book is strongly bound, and will be mailed to any address upon receipt of 50c. per copy. Please address,

Frank Eurich, care of 604 Union Trust Bldg., Detroit, Mich.

Hon. Charles M. Loring of Minneapolis, who was elected president of the American Park and Outdoor Art Association at its recent meeting in that city, has long been intimately associated with park matters. He was the leader in the movement which has given Minneapolis such a magnificent system, and was president of the Park Commissioners for a long period. His sympathies are profoundly with the movement.

The co-operation of the Woman's Improvement League of Minneapolis added very largely to the success of the recent convention of the American Park and Outdoor Art Association at Minneapolis. It is an active organization, having for its object the promotion of the "health, cleanliness and beauty of our city." Mrs. Robert Pratt, secretary, wife of the mayor, was an active participant in the proceedings of the convention.

Mr. George H. Chase of Stamford, Conn., whose family lot is situated in the Willimantic cemetery recently visited the latter and complimented the cemetery committee on the fine appearance of the

grounds. On returning home he forwarded a check for \$500 to the trustees to be used as that body considered best in the good work. Mr. Chase was the donor of the ornamental boundary fence which fronts the cemetery. This affords an excellent suggestion to cemetery trustees in our smaller towns especially. The good appearance of the grounds, denoting care, exerts a powerful influence on such lot owners as may be able to give financial assistance.

Woodlawn Cemetery, Winona, Minn., is one of the cemeteries which of late years have been busy making improvements in line with modern practice. The Perpetual Care and Improvement Fund was increased for the year ending June 1st, by \$1,011.10, giving a total fund now of \$17,232.20. The total number of interments in the cemetery is 4,712, the number for the past year being 135. In the report of the trustees occurs the following: "Our purpose is to continue the further improvements of the grounds as rapidly as our means will permit, believing this policy to be in accord with the wishes—as it certainly is with the interests of the lot owners." The late George P. Smith of Philadelphia, a former resident of Winona, has bequeathed a considerable sum for the benefit of the cemetery, the amount of the legacy is not however definitely known.

In Horticultural Notes in the June issue, in the article from Prof. S. B. Green, Como Park, Minneapolis, should be Como Park, St. Paul, of course. Mr. Fred Nussbaumer, superintendent of parks, St. Paul, calls attention to the geographical oversight.

E. T. Barnum, Detroit, Mich., the extensive manufacturer of iron and wire and brass work, is about to issue a new catalogue devoted entirely to Cemetery Vault Gates and Doors, Guards, Name Plates, Memorial Tablets, in bronze and iron. It will contain a large number of new original designs of this class of work and will be found very useful to anyone interested in the erection of vaults or mausoleums. Copies sent on application to parties interested.

RECEIVED.

Charter, Constitution and By-Laws of the Rhode Island Horticultural Society with a list of members.

Seventh Annual Report of the Park Commissioners of the City of Milwaukee, Wis., 1898.

From Mr. L. M. Moore, superintendent of Parks, Toledo, O., photograph of proposed site for Centennial Exposition in 1903.

Annual Report of the Trustees of Cemeteries of the City of Walden, Mass., for the year 1897.

Annual Report, Board of Park Commissioners, City of St. Paul, Minn., 1897, 1898. Beautifully illustrated with half tones.

Druid Ridge Cemetery, Baltimore Md., 1898. Rules, Regulations and other information. Illustrated with half tones. Also program of Opening and Dedication Services, June 11, 1898, of the cemetery.

From Mr. Geo. J. Baldwin, Vice-Chairman Park and Tree Commission, Sa-

vannah, Ga., copy of the Rules and Regulations of the Commission. By a state law this commission is in charge of all parks, squares, grass plats, cemeteries and trees in Savannah, which gives it ample opportunity for the proper care of the property put in its charge. The commission is now revising cemetery rules which will be adopted later. In an early issue further notice of the above will be given.

VEGETATION AND SCENERY IN THE METROPOLITAN RESERVATION OF BOSTON.—A Forestry report written by Charles Eliot and presented to the Metropolitan Park Commission, February 15, 1897. By Olmsted & Eliot, Landscape Architects. Lampson, Wolfe & Company, Boston, New York and London.

This pamphlet, in heavy binding, comprising some 25 pages of text, nearly 70 descriptive full page half tone engravings and several maps, has been published with the approval of the Metropolitan Park Commission, and concerning it the preface says: "This paper on the Metropolitan Reservations was the last report written by Charles Eliot. The original manuscript, with its maps and numerous photographic illustrations, is at once a record of the condition of the reservations in 1896 as regards their vegetation, and a treatise on the methods of controlling and managing the vegetation in the interest of the scenery. As a record it is not possible to reproduce it in printed form, but as a treatise it can be adequately, though not completely, presented in print, and as such it deserves wide reading, for the principles set forth have wide application." A perusal of the contents and methods of treating the subjects brought under consideration from the varied features of landscape work offered by the Reservation, justifies the suggestions of the preface. It is indeed a treatise so fully illustrated, however that every step in the discussion is before the eye in a remarkably practical manner. It is, moreover, a far reaching memorial to a man of imperishable memory, whose name will always be linked with Boston's Metropolitan Park Reservations.

CATALOGUES.

Catalogue of Elm City Nursery Co., Landscape Gardeners and Nurserymen, New Haven, Conn.

"Flowers can play no part in a military funeral, the rules of army or naval burials forbidding them," explained an army officer to a reporter. "While I was down at Chickamauga recently it was rumored that one of the soldiers in a camp there had died. Indeed, it was so printed in a local paper. The result was that on the following day a large quantity of flowers were sent by sympathetic ladies and others with a request that they should be placed on the coffin of the dead soldier. Now, the fact was that no soldier had died, and the officers had the flowers sent to their quarters. If there were a death in the camp the flowers could not be used, for they are not military in any sense. The only thing allowed on the coffin of a soldier or a sailor is a flag. That has been decided to be decoration enough, and among military men I have never heard the slightest objection to the custom, which has always prevailed."—*Washington Star*.



Hearse Wanted.—Any party having a good hearse for sale would do well to correspond with the Woodlawn Cemetery Association, Superior, Wis.

Thoroughly competent Cemetery Superintendent desires engagement. Experienced in every particular. Satisfactory references. Correspondence solicited in regard to remodeling old grounds, making additions, etc., "Landscape," care PARK AND CEMETERY.

An Iowa inventor has designed a tree protector formed of woven wire attached to metal strips giving it strength, with hooks to fasten it around the tree, the top of the protector being formed of a flexible piece of fabric to bind the tree closely and prevent insects from crawling up into the branches.

Sicily abounds in aromatic herbs; the peppermint, the true mint, and the large coarse mint, which is very handsome; the sage, the thyme, the vermouth; the rosemary, the rue, and a dozen of high medicinal value grew wild in profusion in the south of Sicily, and every poor Sicilian connected with the country understands how to make decoctions from them for the cure of the dreaded fever, which is, however, not prevalent in most parts of

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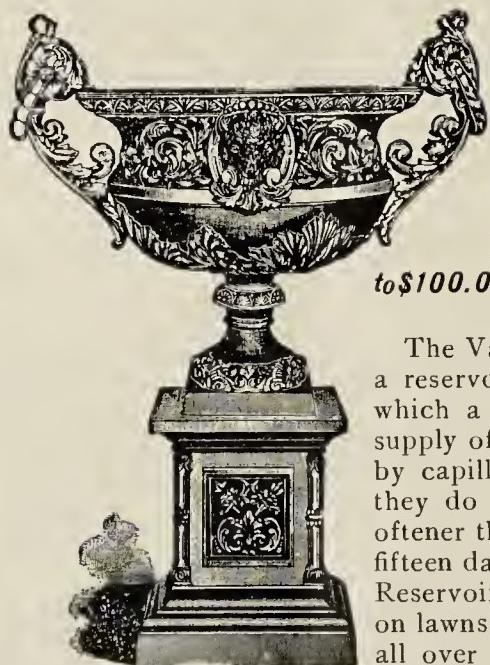
Sicily except in the marshes. The towns if their sanitation were better, would be very healthy.

The Parisians delight in the most lavish floral decorations, but it is doubtful if they have any idea where all the flowers come from. They will now have an opportunity of learning, as a new garden of the Ville de Paris, a sort of state nursery, is about to be inaugurated. Covering an

area of 100,000 meters, there is ample space for the eighty huge conservatories, the pavilions, promenades, not to mention a very beautiful fountain, surmounted by a masterpiece of Dalou, "The Triumph of Bacchus." The place is a fairyland of tropical loveliness, a fairyland that has cost the Ville de Paris \$400,000.

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CONTENTS.

EDITORIAL—OMAHA CONVENTION OF THE A. A. C. S.—NATURE STUDY—SUGGESTIONS TO HORTICULTURAL SOCIETIES—THE RECONSTRUCTION OF THE UNIVERSITY OF CALIFORNIA.....	101
*RESIDENCE STREETS, XII.....	103
*OUT-DOOR ART AND WORKINGMEN'S HOMES.....	104
*THE MACKAY MAUSOLEUM GREENWOOD CEMETERY, BROOKLYN.....	106
*EVERGREEN HYBRIDS OF ROSA WICHURIANA.....	108
BICYCLING IN THE CEMETERY.....	109
A PLANTING CHART OF GARDEN PLANTS, II.....	110
ROYAL BOTANIC GARDEN, KEW, ENGLAND.....	111
*GARDEN PLANTS—THEIR GEOGRAPHY, XXXII.....	112
CEMETERIES OF USE TO THE LIVING.....	114
PARK NOTES.....	116
CEMETERY NOTES.....	117
CORRESPONDENCE - LEGAL.....	118
SELECTED NOTES AND EXTRACTS.....	119
PUBLISHER'S DEPARTMENT.....	20

*Illustrated.

NEXT month will witness the Annual Convention of the Association of American Cemetery Superintendents, which this year is to be held in Omaha, Neb., the city of the Trans-Mississippi Exposition. In the publisher's column of this issue will be found important notices in connection with the meeting. That the Exposition City should have been selected for the occasion, is in many respects fortunate, it adds very great interest to the convention; there is much to be seen of an educational nature to the superintendent, and much of general value not available under other circumstances, and it contributes to the pleasure of the trip in no uncertain way. The reduced railway rates to Omaha is an inducement not to be overlooked, and taking all the features of the case into consideration, with the splendid program of instructive papers and discussions provided, cemetery

officials should allow nothing to stand in the way of their attendance, that can possibly be made to wait.

“RELATIONSHIP with nature is a source of inexhaustible delight and enchantment.

To establish it ought to be as much a part of every education as the teaching of formal knowledge, and it ought to be as great a reproach to a man not to be able to read the open pages of the world about him as not to be able to read the open book before him.” Thus writes Hamilton Wright Mabie, and the truth is accepted and emphasized by the rapidly expanding effort to make Nature study an essential part of our common school education. It is accentuated in our own line of work by the rapid development of the projects for establishing more small parks in our crowded cities, and of the plans for planting out the school yards. It is in a measure an anomaly that the country school boy or girl needs such education as well as those of the city, so that the school garden is a general necessity in a broad sense. The enlightened nations of Europe have for some years past recognized the value of the school garden as an educational feature, and with the growing appreciation of its value, we may be sure of its early and permanent establishment in our own great country. With the adequate establishment of small parks and school gardens in our cities, and that of park reservations and school gardens in the country places, art out-of-doors will receive an impetus which will carry the cause closer and closer to the home, and make the way easier to avoid the penalty conveyed in Mr. Mabie's words.

IT is gratifying to note that the Horticultural societies of the country are broadening the scope of their work, and including allied subjects in the programs arranged for their annual meetings. It is well for them so to do; it enlarges their field of usefulness and opens up avenues of progress alike beneficial to them in their association capacity, as to the public which is finally benefited by their discussions and practice. In the domain of landscape art, or art out-of-doors as it is becoming familiarly

referred to, the horticulturists can give most effective assistance by aiding to awaken that interest so essential to its progressive development. And, moreover, it is one in which they perhaps more than any other class, are materially interested. The discussion of topics pertinent to village and country improvements, wherein the cultivation of shrubbery and trees may form the principal feature of the discussion would be of great help. It would afford a valuable fund of information if every horticultural society would discuss and determine the kinds of trees and planting material particularly adapted to certain localities within its influence, with the best systems of cultivation and care; and such societies are eminently capable, by their composition and experience, of determining just such information and presenting it in an available form for the common understanding of the community. It is by the intelligent and widespread effort of all interested that an era of art out-of-doors improvement can be inaugurated and encouraged, and those materially interested in its promotion should avail themselves of every suggestion to this end. During the meeting of the East Tennessee Horticultural Society, to be held in Knoxville, September 6-8, the following papers are to be read: "The Use of Bulbs in Beautifying the Home," "Hints on the Cultivation of Flowers," "How to Make an Attractive Lawn," "Some Valuable Shrubs," and "Gardening on a City Lot." The whole program is of general excellence. Apropos of the work of Horticultural societies in the general question, at a recent meeting of the Massachusetts Horticultural Society, an amendment to the constitution was adopted, establishing a standing committee on forestry and roadside improvement, and a fund was appropriated for its use. This is in line with the suggestions above made and is very gratifying.

ONE of the most important projects now under consideration, and in which the combined genius of the architect and landscape architect must be brought into exercise if the best results are to be secured, is the reconstruction on an ideal plan of the University of California at Berkeley. For this, as has been before reported in these columns, a program has been prepared, and the architects of the world have been invited to enter a competition for an architectural plan. In a recent issue of *The American Architect*, Mr. Warren H. Manning, landscape architect, discusses the landscape phase of the project in quite a comprehensive manner, and clearly shows that the problem before the designers is not only a complex one, but one requiring profound study to ensure results likely to prove thoroughly satisfactory in the future.

When the plan is secured, Mr. Manning says: "it is to be hoped that they will also be able to fix the plan, and a consistent policy regarding it, so firmly that their successors will not depart from it. The authorities of nearly all of our important educational institutions have, in the beginning, or at different periods of the growth of these institutions, adopted a more or less comprehensive plan of grounds, or a style of architecture, with the intention that future additions should conform to it, but such preconceived plans have, for various reasons, been radically departed from or only partially realized." The program provided by those in charge of the competition does not appear to be framed so as to invite landscape architects to offer plans, and on this feature of the work, Mr. Manning says: "The landscape problems presented by the site in question are so unusually intricate that the advice of a skilled landscape designer would have been of much assistance in the preliminary stages of the undertaking to determine in advance the areas required for each department, the practicability of providing for all of these on the site selected, and to consider in conjunction with the architects, the character and disposition of buildings and means of communication, and their association with existing and proposed plantations, all these to be considered as elements of and related to the landscape of the chosen site." It can to-day safely be asserted that no great architectural scheme, involving landscape accessories, can be properly designed without the co-operation of the landscape architect,—to such an important position has that profession risen in this country,—and without such co-operation in perfect harmony the successful carrying out of such a project as is contemplated, cannot be expected. Mr. Manning examined the grounds and found that the present total area amounts to some 350 acres, of which the possibly available ground for the requirements of the program is an area of 225 acres, and of this only some 60 acres are flat sites for buildings, etc. He then discusses the program in regard to proposed buildings, areas of approaches, etc., comparing them with similar details of the other leading institutions of the country, and elaborating upon them. After a comprehensive review of the practical features of the scheme, he concludes that it is impracticable to provide adequately for all the program calls for. If all the buildings are provided for, with future extensions, on this site, it will be necessary to crowd the buildings on rugged and irregular land. "This will result in picturesque grouping and treatment, much more in keeping with the character of the topography and landscape than if anything approaching a rectangular arrangement is attempted."

RESIDENCE STREETS.—XII.
(Concluded.)

It may be well to name again, in a general way, the various features of residence streets, calling especial attention to those in which most improvement can be made. The constructed parts, the roadway and the sidewalks, should be made for use. They should be smooth, hard, durable, shaped so that storm water will readily run off, and should receive constant care so that they will

sion having been that it was a gentleman's private drive. If other people had the same idea with regard to the streets upon which they live, this parklike planting might extend indefinitely and add greatly to the attractiveness of the residence portion of our cities. Not only would the streets themselves be greatly improved in appearance, but I believe the influence of such treatment would extend to the home grounds.

I wish that the appreciation of beautiful streets



FIG. 22.—GRAND BOULEVARD, CHICAGO.
An example of the way leading thoroughfares are disfigured in large cities.

be kept clean and neat. The ornamental part, that is the parkways and the boundary planting on each street, should be treated in such a way as to take advantage of our wonderfully varied forms of plant life. A gentleman owning the land on both sides of a street in a city of northern Illinois, has removed the fences and planted in their places quantities of barberry bushes, Japan quince, buck-thorns, prickly ash and sweet briars. The parkways retain some of the native trees, and there has been additional planting. Elms, lindens, maples, oaks and other trees have been used, and also red branched dogwoods, syringas and viburnums. The groups planted are as irregular as the native growth. Recently a man from another city, after having ridden through this street, was surprised to find that it was a public thoroughfare, his impres-

tion having been that it was a gentleman's private drive. If other people had the same idea with regard to the streets upon which they live, this parklike planting might extend indefinitely and add greatly to the attractiveness of the residence portion of our cities. Not only would the streets themselves be greatly improved in appearance, but I believe the influence of such treatment would extend to the home grounds.

With a little more study, and a little more observation, but without any greater expenditure of money than is put upon many streets at the



Fig. 23—Showing how Beautiful Street Borders might be in Winter

present time, I believe that one's pleasure in walking and driving might be fully doubled. A man's daily journey, going to his office and returning to his home, might be among surroundings that an artist would like to paint. *O. C. Simonds.*

OUT DOOR ART AND WORKINGMEN'S HOMES.*

It is not the purpose at this time to give instruction in landscape gardening for those who are past masters in the art in this country. It is not our intention to treat from a professional stand-point the proper adornment of grounds whether large or small. Our object is simply to emphasize, principally by illustration, the economic value of a simple knowledge of gardening in workingmen's homes, and an enthusiasm for the beautifying of the neighborhood. It is proposed to show how in one city, through the interest and intelligent efforts of the residents of the large section, under the leadership of an enthusiastic and energetic business man, nuisances had been abated, streets and alleys cleaned, homes beautified and the lives of hundreds made happier, all through the practical application of the principles at the foundation of this Out-door Art Association. It is hoped that by this illustration others may be led to make similar efforts, and that not only those present, but many more may be influenced to continue the experiment.

The organization of this Park and Out-door Art Association is most conclusive evidence that there is a wide spread public sentiment making itself felt in favor of the improvement of home surroundings, streets, school grounds and parks. The cultivation of good taste in

flowers not only brings pleasure to men but changes their character and habit of thought and action. Bleak surroundings, filth and lack of interest make the home life unhappy and dwarf all good ambitions. Such an organization as this has for its purpose not only the cultivation among its members of greater pleasure in their grounds and surroundings, but the instruction of the masses of men in the simple principles of landscape gardening.

The great problems of our day are those of city life with its crowding and herding in dark places. Tenement houses with all their attendant evils give the serious turn to every city. Whatever assists in brightening the lives of working people whether in large cities or small, has a distinct value to the world in which we live. The encouragement of working men to live away from the crowded districts is one of the duties of our time. Cities of perhaps 100,000 or less furnish the best opportunity for efforts of the kind to be described at this time; because here most people live in single houses with larger or smaller yards attached to each. If these residents can be encouraged to an active interest in beautifying the immediate surroundings of themselves and their neighbors, a distinct step has been taken toward the attainment of one accomplishment.

It is no reflection upon the value of parks or public gardens to say that the best and surest method for improving the condition of the masses is to encourage home planting and cultivation of vines and flowers, even in the small door yards of the crowded streets. That it is impossible to interest entire communities, old and young, has been demonstrated. That wise encouragement of home care with definite instruction in the best methods of planting will completely revolutionize a neighborhood or even an entire section of a city, has been fully proved in the experience of the community to be used as an illustration.

The reflex influence of instruction in flower cultivation and home making is seen not only in improved health conditions, but in purer morals, a higher plane of living, nor is this confined to men and women alone. Children may be interested, and when they are aroused



A CORNER OF THE LAWN OF THE NATIONAL CASH REGISTER CO., DAYTON, OHIO.

*Paper read at the Minneapolis Convention of the American Park and Outdoor Art Association. By Edwin L. Shuey, National Cash Register Co., Dayton, O.

rubbish disappears from the back yards and alleys, and trees and flowers are cultivated.

In the community referred to a boys' Club last spring fixed a fine upon each boy who should walk over the lawn of the factory when the gardener was trying to reclaim a recently sodded yard. Last summer these same boys cultivated flowers and vegetables in a large open field with little disturbance from any one. In this particular instance a border of flowers was planted upon the entire front and sides of the gardens, with no fences for protection, though on one of the leading streets. During the entire summer it was never necessary to say to the boys "Don't pull the flowers" or to speak a restraining word regarding their care. Even the idle street urchins who came to make faces at the boys working industriously in their garden patches were never known to pull the flowers,—although no watchman was kept on these grounds. Hundreds of people passed along the street daily, or came to see the boys at work in their gardens, and from this observation many were led to change entirely their habits at home.

It must be seen therefore that money and labor expended in beautifying parks and improvement of streets by planting trees and grass wherever possible, and in beautifying the homes of the people, is well and wisely expended, and it is productive of more good to a community than can be secured in any other manner. How to secure these results is one of the problems of this association and its influence should be felt in every city and community. Believing that it is facts and not theories, experience, not ideals, that even enthusiasts want to-day, I beg simply to tell the story of one community's efforts to solve the problem of better living by encouraging a love of simple home beautifying and instruction in the plainest elements of gardening. The statement of the principles you can make for yourself, I simply give their application. Incidentally it may be mentioned that this story and that of the factory which is its center, has been told in the great cities of Europe and America and has proved helpful to many thinking people.

Ten years ago in the southern part of the city of Dayton, Ohio, one of Ohio's prettiest cities, was a section known as "Slidertown." It was distinctly an undesirable portion of the city, full of nuisances, mud holes, and undesirable classes of residents. Into this section came a little later a factory (That of the National Cash Register Company) with the attending advantages and disadvantages. After a few years experience the owners of this factory (Messrs. J. H. & F. J. Patterson) influenced by numerous difficulties resulting largely from their surroundings, determined to change the condition,

and if possible to make the factory the leader in improving the entire section of the city. Realizing that practice often precedes precept, they began by setting the example about their own premises. Their factory grounds were at once beautified in a simple but effective way by cultivating of lawns and the planting of shrubbery, using only such plants as easily grow in this climate. Mr. J. C. Olmsted was invited to visit the city and this work was done under his suggestion. The president of the company (Mr. J. H. Paterson, a member of this association) went a step further and invited his employees and their friends to visit his own beautiful grounds in the center of the city, giving them thus a practical example of what might be done on a city lot. The effect of this effort soon became apparent in the neighborhood, as one by one the employees who were accustomed to these comfortable surroundings during their daily toil came to carry the idea into their own little homes in the neighborhood.

Then realizing that organization is just as important in a community as in a business, under the leadership of the president of the company an organization of the people of the neighborhood was effected. To indicate that they were stepping upward the name of this section of the city was changed to "South Park," and the association organized was called the "South Park Improvement Association." Its work though less than three years old is familiar to many of you, and has come to be known throughout the entire country. Through this association all subsequent efforts have been made, though the power behind the throne is still



A PRIZE HOME AND YARD IN SOUTH PARK, DAYTON, OHIO.

the factory and its officers. After example came precept, and it was seen in order to get the best results in a neighborhood, instruction was necessary in the simplest method of home planting. Regular meetings of this association were held at which talks were given by competent men on rules to be observed in ornamental planting, on the best kinds of shrubbery to be used in this climate and community, and on the principles of artistic gardening. The stereopticon was a great assistant in all this, and on each occasion pictures were shown of homes large and small in various parts of the world, and of ideal methods in planting. In order to cultivate a spirit of enthusiasm for suburban parks many pictures were given of the great parks of the world, and thus a public sentiment aroused upon the value of parks and gardens. The city is under obligation to many of the members of this association for assistance in carrying out these plans; for hearing of the work done, men and women from many parts of the country have sent photographs of their own grounds which might be used in this training. It may be added that in order to make this teaching

effective, photographs were made of every unsightly place in the territory, and thus by directing public attention and criticism toward it the abatement was almost certain to follow. Still another method of instruction was introduced. In this factory there meets each Sunday afternoon a Sunday school of over 400 members from the neighborhood. This school not only studies the usual Bible lessons, but on the principle that home life and godliness are closely allied, lessons are given in the elements of home gardening and children's work. Seeds are distributed each spring and prizes are offered to those obtaining the best results from their summer's planting. Besides this are the Boys Club, Girls Club, Mothers Guild, school of Domestic Economy, and a score of other organizations fostered by this company, in all of which the value of simple home gardening and a love of flowers is inculcated.

A still further step was taken which has had even a greater influence in the wide spread interest in this work. The company offered a series of prizes for the best examples of home gardening, window gardening, cleanly kept back yards, neat squares, and to the boys and girls, back yards and vegetable gardens. These prizes amounting to about two hundred dollars annually have encouraged very many to a study of the best methods of planting in small yards. Photographs are taken at the beginning and end of each season showing the changes, and a competent committee after visitation awards the prizes. The improvement has been remarkable and from year to year the growth in taste has been shown. Not only those who entered the competition for the prizes, but many of their neighbors under the impetus of this example have joined in the improvement of their grounds.

The result of all this effort has been a marked improvement not only in this section whose residents are proud to refer to "South Park;" but in every other part of this beautiful city. Attention having been called to the condition of streets and sidewalks these have been changed and the city authorities have been compelled to join with this organization in the gradual improvement of the public thoroughfares of the neighborhood. The union of effort has also led to the removal of tight board fences, and the cultivation of shrubbery and vines along such division lines, the planting of trees in small open spaces, the abatement of public and private nuisances, and the gradual change of an entire community into a veritable garden spot. While not everything to be desired has been accomplished, enough has been done to show the influence of thorough organization with definite purposes in view. When it is remembered that all this work has been done in about three years, the most skeptical must be convinced of the possibilities of such efforts.

These results can be seen in the pictures shown, but more than this is the changed character of many homes and families, in the contentment, health, ownership of land and finer tastes that are apparent everywhere. Men who work all day with beautiful surroundings want the same at home, and women who have once cultivated flowers will not allow the inside of a little home to be untidy. So while the favored ones of the world may have the enjoyment of mountain, lake, hillside and seaside, these homes are attractive and healthful to the worker, and his influence will compel unwilling public officials to supply public parks and public gardens. Such work is possible to every city. Intelligent

leadership only is needed, and this should come from such men and women as are represented in this gathering.

(Mr. Shuey illustrated the most of what he said by stereopticon pictures showing the great changes wrought in South Park, a suburb of Dayton, through the influence of the National Cash Register Company and its owners, the Messrs. J. H. & F. J. Patterson, and of the South Park Improvement Association. These pictures are largely taken from photographs of the grounds and homes of the factory and neighborhood, and by their contrasts emphasized the simplicity and effectiveness of such instruction and organization.)

THE MACKAY MAUSOLEUM, GREENWOOD CEMETERY, BROOKLYN, NEW YORK.

The recently completed Mausoleum, erected on Ocean Hill in Greenwood Cemetery, Brooklyn, New York, for Mr. John W. Mackay, as a memorial of his son, is one of the most magnificent structures of its kind in existence. It has been in progress for some three years, and both the old and new worlds have been drawn upon for the material entering into its construction.

It is in plan, a Greek cruciform, treated in the Renaissance style of the fifteenth century. The exterior is built of Hallowell granite. It occupies an area of 33 feet square by some 47 feet in height. It is surmounted with a massive cross, and a group of bronze statuary embellishes each of the four sides. These symbolize Religion, consoling grief, Faith pointing to Heaven, Hope and Peace. These groups were modelled and cast in Europe.

The entrance doors are of standard bronze; they lead into a vestibule, which again opens into the interior through two heavy, richly wrought and chased bronze grilles.

The vestibule opens into an exquisitely decorated and appointed chapel, the principal feature of which is an altar constructed of rare marbles and onyx, with a reredos, in which is set a Madonna and child in white marble. The base of the altar is cut from light Italian, and the altar proper is a large slab of black Irish marble. On this upon ornamental supports of green Irish marble rest four carved onyx columns. The slab of marble in the reredos, in which is set the Madonna and Child, is pure yellow Carrara, said to be one of the finest specimens in the world. Beneath the group of the Madonna is the figure of a cherub offering adoration. This group of sculpture was executed by a famous Italian sculptor centuries ago.

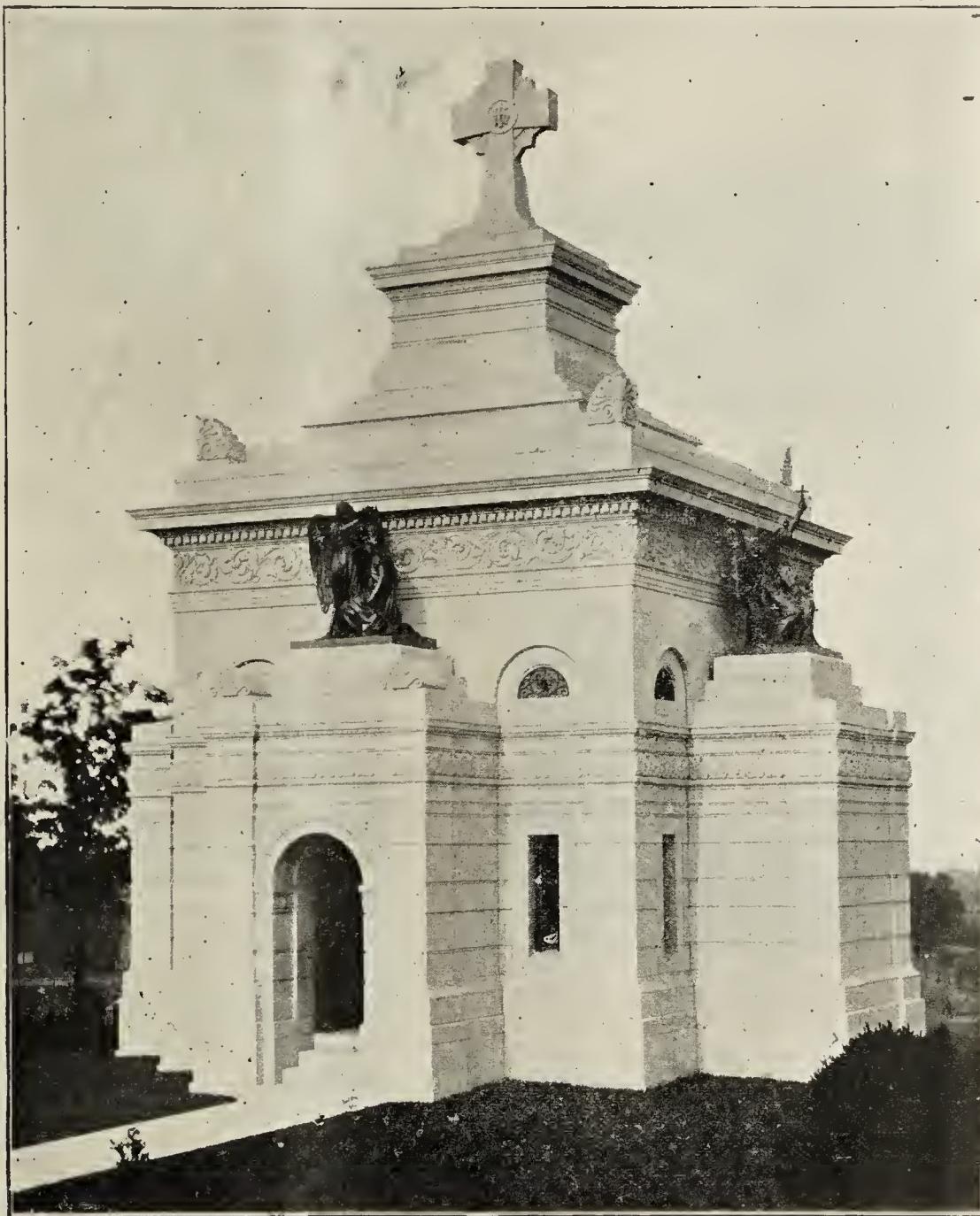
The ceiling is a dome, decorated with Venetian glass mosaics of several shades of gold, ending in the apex of the dome in a cardinal cross entwined with palm branches. Concealed in the marble molding surrounding the base of the dome are sixty incandescent electric lamps, which, when connected

with the current, produce exquisite effects of light and shade upon the gold, green and cardinal shades of the wide expanse of mosaics.

Beneath the altar is a crypt designed for two bodies, and in each of the north and south wings are crypts for ten bodies. Those under the altar are enclosed by bronze grilles. The crypts are all of Tennessee marble, closed with a slab of the same

way, the interior very greatly resembles a miniature cathedral auditorium.

The capstone occupied about a year to produce and its transportation was a matter of great interest. It was impossible to find a vehicle equal to its transfer from the New York docks to the cemetery, and it was hauled on rollers the two miles distance, a heavy bond being given the city to guard against



THE MACKAY MAUSOLEUM, GREENWOOD CEMETERY, BROOKLYN, NEW YORK.

material, fitted with bronze screw sockets for detachable handles. They are protected from vandalism by combination locks and electric bells.

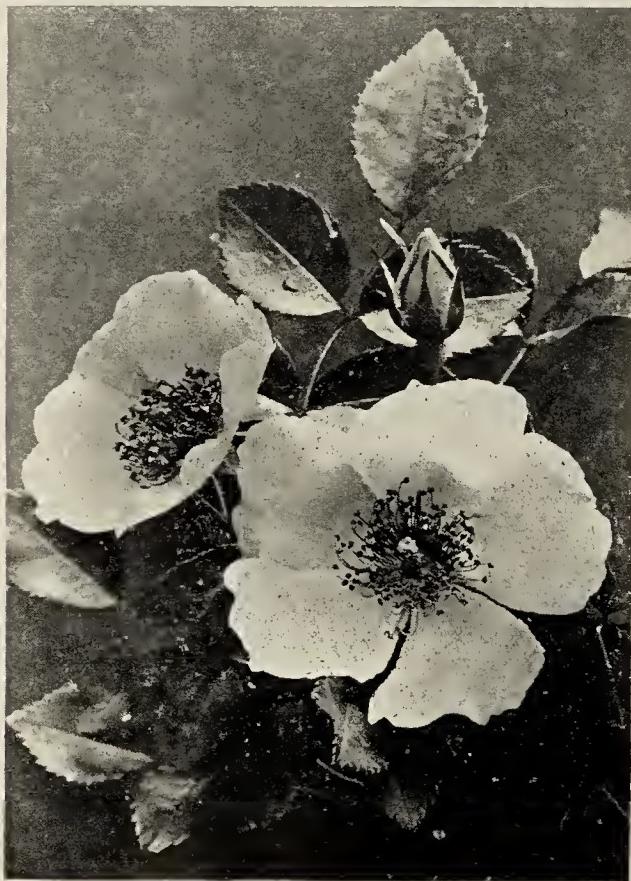
On each side of the interior is a solid column of Sienna marble connected with the arching of the dome, and the marble work of the interior is of many choice varieties and colors. The floor is of Italian mosaic work of various designs, including adaptation of the Mackay family monogram. It is lighted and heated by electricity; and, in a general

damage. It was, however, successfully carried and raised into place without the slightest damage. The granite approach is in two pieces, the first forming the stoop is 11 ft. 1 in. by 7 ft. 9 in. by 4 ft., which rests on a solid stone foundation four feet deep. The foundation under the stoop is six feet below the gutter line. The foundation under the mausoleum is solid except under the floor space and is ten feet deep of stone laid in Manheimer cement. The roof stone is 20 ft. 6 in. by 20 ft. 6 in. by 1 foot.

EVERGREEN HYBRIDS OF ROSA WICHURIANA.

An initial set of the hybrid Wichuriana roses raised by W. A. Manda of South Orange, N. J., were figured in PARK AND CEMETERY, p. 419, 1897. In addition to other good qualities they have been tested as forcing roses by Mr. Robert Grey, now head gardener on the Ames estate, North Easton, Mass., and found quite satisfactory.

The set of handsome hybrids now being much talked of are not yet in commerce. I had recently an opportunity to see them in bloom at Manda's nursery, and believe they will prove excellent covering plants for a wide section of country, and of



NEW EVERGREEN ROSE—"JERSEY BEAUTY"—FLOWER,
TWO-THIRDS NATURAL SIZE.

great use to planters who desire roses for clothing the bare ground of embankments, mounds, large lots in cemeteries, or for training over fences, rocks, etc. They have the habit of Wichuriana—the so-called memorial rose. I think the two crosses by Perle de Jardins the most beautiful and unique. Jersey beauty is a single rose with clusters of golden stamens and beautiful green foliage, which without flowers renders the plant a valuable one for covering rose beds and lending them the vivacity they often lack when out of flower. This rose will take the place of Rosa *lævigata*—the Cherokee rose, northward. Gardeneiflora is a double rose from the same cross. It is, I believe unique in some respects. It has beautiful yellow buds similar in shape and color to "Perle" itself. The expanded blooms are nearly

white, and the combination of these two colors, and the somewhat unusual shape of the Gardenia like

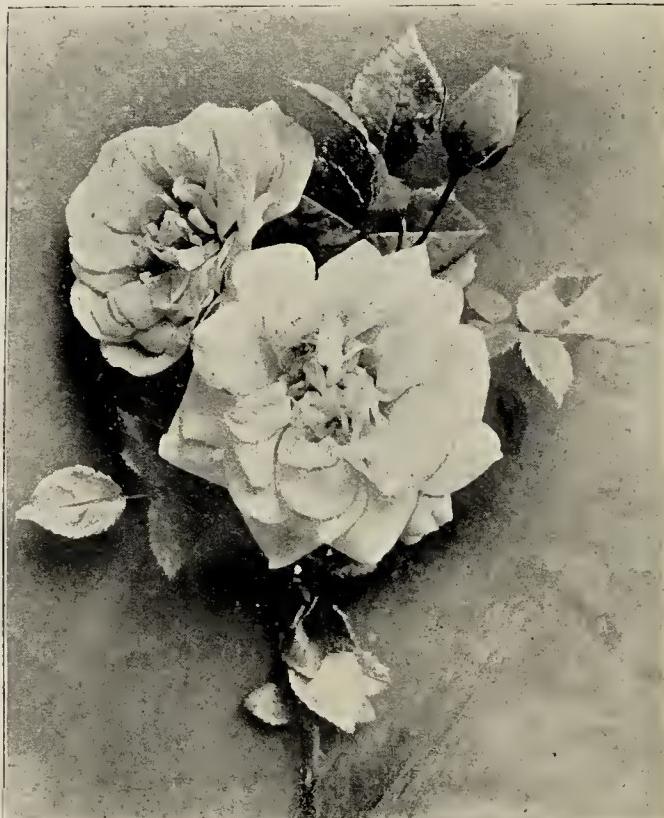


NEW EVERGREEN ROSE "JERSEY BEAUTY,"--FOUR YEARS OLD
SHOWING HABIT.

flowers, renders this a very pleasing object indeed. The photograph shows the characters referred to exactly.

Evergreen Gem is a cross by Mad. Hoste. It has whiter flowers, and foliage of a less shining, but very luxuriant and pleasing character.

An unnamed cross by Meteor is a very handsome rose too, with large flat flowers of the La



NEW EVERGREEN ROSE "GARDENEIFLORA,"—FLOWER,
ONE-HALF NATURAL SIZE.

France shade of pink. When these roses are ready for distribution they will no doubt be in great demand.

BICYCLING IN THE CEMETERY.

At the convention of the Association of American Cemetery Superintendents, held at St. Louis two years ago, the bicycle loomed up for consideration in the course of the proceedings, and an animated discussion ensued as to the desirability of admitting it into the precincts of the cemetery. To obtain the sense of the meeting on the question a ballot was taken which resulted in a very large majority in favor of the wheel. Since that time however, with more extended experience, and with a possible better understanding of human nature in combination with a bicycle, there appears to be a decided bias setting in against it.

The regulation of its use must of course be a matter of exceeding great delicacy, for the line has to be drawn between the rights of the man owning a carriage and the one using a wheel. This must be said however in favor of the carriage, that restrictions on its use are easily controlled, while the ubiquitous wheel has given frequent offense in public places by the flagrant disregard of its rider of all rules and regulations when the official eye is not in evidence. Again the very popularity of the wheel leading to its acquisition by all classes of society, gives a much lower average of responsibility, morally and physically, to the frequenter of the cemetery on the bicycle.

The following expressions from many leading cemeteries will show the sentiment now prevailing:

"We do not allow bicycles in our cemetery at all under any circumstances."—*Matthew P. Brazill*, Supt., Calvary Cemetery, St. Louis, Mo.

"Bicycling on the grounds, is not allowed. Wheels must be left at the gates."—*J. B. Gazzam*, Sec'y., Bellefontaine Cemetery, St. Louis, Mo.

"We do not admit bicycles to our cemetery, we keep racks at the entrances where riders may leave their wheels and visit the grounds in our cemetery conveyance, or on foot as they prefer."—*F. W. Chislett*, Supt., Crown Hill Cemetery, Indianapolis, Ind.

Chicago cemeteries generally have no restrictions against the decorous use of bicycles in their grounds.

"Our superintendent at the cemetery by tacit consent prohibits bicycle riding in the grounds on Sundays and holidays, but permits it at any other time, under conditions that save other visitors and the grounds from injury. We have no written or printed rule on the subject however, as we have not on many other subjects in which the superintendent's general police powers are regarded as sufficient to deter visitors from doing any act that will injure either the grounds or visitors."—*Edward Ferguson*, Sec'y. and Treas., Forest Home Cemetery, Milwaukee, Wis.

"We have no rules or restrictions on bicycle riding."—*J. C. Dix*, Supt., Riverside Cemetery, Cleveland, O.

"A few years ago the trustees of Oakland decided to restrict the use of bicycles to lot owners only and issued tickets to that effect, good for one season. This was continued for two or three

years by which time the public was pretty well educated in regard to the use of bicycles in the cemetery. For the last two seasons the rule has not been enforced and unless the use of the bicycle becomes much more aggravated in the future than it has been during this time it is not likely to be again. The extra trouble in looking after those that are not lot owners is much more than offset by the labor and worry saved from issuing tickets and looking after them."—*John M. Boxell*, Supt., Oakland Cemetery, St. Paul, Minn.

"We have no written rules concerning bicycles, but do not permit the public to ride them through the grounds. Some of our men who are the heads of the different departments ride wheels in performing their duties. We fear if the lot owners were permitted to come on wheels, our grounds would be over run with them and if once permitted would be difficult to stop."—*Wm. Salway*, Supt., The Cemetery of Spring Grove, Cincinnati, O.

"We have adopted no special rules as regards bicycles in the cemetery. The only one we have is that in our old rules—No bicycle or tricycle allowed in the cemetery."—*W. J. Har- graves*, Supt., Forest Hills Cemetery, Boston, Mass.

"Our restrictions for bicycle riders are, that we issue a pass for lot owners only to enter the cemetery on bicycle."—*H. J. Diering*, Supt., Woodlawn Cemetery, New York.

"Bicycle riding is not allowed in our cemetery."—*F. A. Sherman*, Supt., Evergreen Cemetery, New Haven, Conn.

"We furnish all lot owners with a permit for the bicycle, and no outsiders are allowed to ride a wheel in the cemetery."—*A. W. Hobert*, Sec'y and Supt., Lakewood Cemetery, Minneapolis, Minn.

"Swan Point Cemetery has no restrictions or rules about bicycles, presumably because I never asked for any. To prevent people from riding to their own lot, or to friends lots, seems to me very harsh, and imposes unnecessary hardship on proprietors or admirers of the cemetery, and as no complaints have come from these or any other source, I did not feel like depriving our people of this mode of conveyance unless we furnished a substitute."—*Timothy McCarthy*, Supt., Swan Point Cemetery, Providence, R. I.

"We allow lot owners only with a special season ticket to pass the gate with bicycles."—*Robert Scrivener*, Supt., Cedar Hill Cemetery, Hartford, Conn.

"St. Agnes Cemetery allows no bicycle riding within its grounds."—*B. D. Judson*, Supt., St. Agnes Cemetery, Albany, N. Y.

"We do not restrict bicycles except that they must keep to the roads and go at a moderate speed."—*D. Z. Morris*, Supt., Mt. Hope Cemetery, Rochester, N. Y.

"Bicycle permits are issued only to lot owners and their families in this cemetery."—*Eugene Cushman*, Supt., Greenwood Cemetery, Brooklyn, N. Y.

"We allow bicycles at all times, except Memorial Day, the 30th. of May and the following Sunday, that is Memorial Sunday with us. On these two days of the year we exclude bicycles and vehicles of all kinds."—*John J. Stephens* Asst. Supt., Green Lawn Cemetery, Columbus, O.

"We do not restrict bicycle riders as yet. How soon we may do so I cannot say."—*Geo. M. Painter*, Supt., West Laurel Hill Cemetery, Philadelphia, Pa.

The following is the vote of our Trustees governing the admission of bicycles.

Voted: that the secretary under the direction of the President, be authorized to issue yearly passes to proprietors of lots, to enter the cemetery upon a bicycle, under the following conditions: 1. The bicycle to be used upon avenues only.—2. The rate of speed not to exceed 5 miles an hour.—3. No "coasting" to be indulged in.—4. The rider in no case to pass a funeral procession or near to any lot where funeral exercises are taking place, unless he shall be dismounted.—5. The pass to be shown whenever used.—6. The pass to be cancelled upon a violation of any one of the above conditions.

So many pleasure seekers pass the cemetery that the general admission of those on wheels would prove an annoyance to lot owners. *John C. Scorgie*, Supt., Mt., Auburn Cemetery, Cambridge, Mass.

A PLANTING CHART OF GARDEN PLANTS—II.

The following groups suggested for planting the chart given in the last issue, include among many exotic hardy plants, such well-known species as follow:

1. Ranales: Virgin's bower, wind flower, hepatica, meadow-rue, globe flower, hellebore, columbine, larkspur, baneberry, magnolia, tulip tree, barberry, may-apple, nelumbo's and nymphæa.

2. Parietales: blood-root, horn-poppy, climbing fumitory, Dutchman's breeches, rock cress, alyssum, rocket, treacle mustard, cleome, mignonnette, rock-rose, pansy and violet.

3. Polygalales: Milkworts.

4. Caryophylales: Carnations, catchfly, sandwort, cockle, mouse-ear, portulaca and tamarix

5. Guttiferales: St John's-wort, stuartia and Loblolly Bay.

6. Malvales: Mallow, glade mallow, rose mallow and basswood.

7. Geraniales: Flax, crane's bill, wood-sorrel, balsam, rue, prickly ash and hop tree.

8. Olacales: Holly, both evergreen and deciduous, and mountain holly.

9. Celastrales: Bitter sweet, spindle tree, supple jack, buckthorns, New Jersey tea and ornamental grape vines.

10. Sapindales: Horse-chestnuts, maples, box elder, bladder-nut and the finer sumachs.

11. Rosales: Yellow wood, whin, broom, lupine, false indigo, hoary pea, locusts, wistaria, coronilla, tick trefoil, bush clover, everlasting pea, butterfly pea, red bud, Kentucky coffee tree and honey locust.

11a. Flowering plum, peach and cherry, meadow sweet, five fingers, roses, flowering apples, hawthorns and June berries.

11b. Saxifrage, mitre-wort, alum root, hydrangea, stone crop, witch hazels and sweet gum.

12. Myrtales: Meadow beauty, loosestrife, willow herb, evening primrose and cupheas.

13. Passiflorales: Passion flower, wild balsam, apple and ornamental gourds.

14. Ficoidales: Prickly pear, ice plant, &c.

15. Umbellales: Cow parsnip, giant fennel, eryngo, angelica tree, dogwoods, ivy and tupelo.

16. Rubiales: Elders, arrow woods, snow-berry, honeysuckle and woodbines, bluets, button bush and partridge berry.

17. Asterales: Valerian, thoroughwort, golden rod, rayless rod, daisy, aster, groundsel tree, everlasting, cone-flower, sunflower, marigold, chrysanthemum, wormwood and star thistle.

18. Campanales: Cardinal flower and Canterbury bells, &c.

19. Ericales: Andromeda, sorrel tree, heather,

kalmia, rhododendron including azalea, white alder, winter green, galax, and many others.

20. Primulales: Sea lavender, American cow-slip, primrose, loosestrife, pimpernel and ardisia japonica.

21. Ebenales: persimmon, styrax, halesia and sweet leaf.

22. Gentianales: Ash, fringe tree, privets, milkweed butterfly weed, &c., pink root, sabbatia, gentian, buckbean and floating heart.

23. Polemoniales: Phloxes, Greek valerian, lungwort, forget-me-not, morning glory, night shades, old world ground cherries, "cultivated jimson weed," tobacco's and matrimony vines.

24. Personales: Cultivated mullein, toad flax, snap dragon, beard tongue, monkey flower, speed-well, trumpet flower, Indian bean and acanthus.

25. Lamiales: Verbena, French mulberry, perilla, hyssop, thyme, sage, horse mint and dead nettle.

26. Polygonales: Abronia, amaranthus, Iresine, goosefoot, orache, poke weed, knot weed and buckwheat.

27. Podostemales: Include the river weed, rarely or never in cultivation.

28. Asarales: Wild ginger, birthwort, &c.

29. Piperales: Lizard's tail, &c.

30. Daphnales: Alligator pear, sassafras, wild allspice, leather wood, daphne, eleagnus and shepherdia.

31. Santalales: The host trees of the American and European mistletoe, that they may be grown southward. So far, berries of the European kind, have failed for use in New Jersey.

32. Unisexuals: *in place of Quernales*. Spurge, phyllanthus, jatropha, croton, acalypha, castor oil and boxwood.

32a. Elm, hackberry, hemp, hop, osage orange, mulberry, figs and plane trees.

32b. Quernales: Walnut, hickory, bayberry, birch, hazelnut, alder, hornbeam, oak, chestnut and beech.

33. Salicales: Willows, broom crowberry and hornwort.

34, a, & b. Coniferales: Pine, spruce, fir, hemlock, larch; bald cypress, cypress, arbor vitæ, juniper, ginko and yew.

35. Orchidales: Eel grass, frog's bit, ladies' tresses, rattlesnake plantain, rein orchis and lady's slipper.

36. Narcissales: Thalia, canna and bananaplants.

36a. Iris, blackberry, lily, atamasco lily, American aloe and yam, &c.

37. Liliales: Green brier, wild hyacinth, day lily, yucca, lily of the valley, asparagus, dog's tooth violet, lily, wake robin, pickerel weed and spider wort.

38. Palmates: The bog and wood rushes where palms cannot be grown.
39. Arales: Arum, calla, golden club and calamus.
40. Potomales: Water plantain, arrow head, pond weed and pipewort.
41. Glumales: Sedge galingale, spike rush, bulrush, cotton rush, &c.
- 41a. Ornamental grasses.
- 42 Ferns.

ROYAL BOTANIC GARDENS, KEW, SURREY,
ENGLAND. III.

In 1861 a reading room was provided for the foremen and gardeners, and Prof. Oliver delivered lectures to them throughout the winter, the initial step of the present courses of instruction to the young gardeners. The excavations from the large lake, covering almost 5 acres in the Arboretum, was used to form the terrace surrounding the Temperate House. At this time the joint labors of Sir Joseph D. Hooker, then Assistant Director, and Mr. Bentham started the publishing of the renowned "Genera Plantarum," a work fully describing and classifying the 7,585 genera, and 96,680 species of flowering plants. Indeed, the scientific publications elaborated wholly or in part at Kew, were of the first order, and only possible with the assistance she could afford. "Flora, of the Australian Colonies," by G. Bentham and Dr. Mueller; "Flora, of the Cape Colony, British Caffraria and Natal," by Dr. Harvey and Mr. Sonder; "West Indian Flora," by Dr. Grisebach; Mr. Thwaites' Enumeration of Ceylon Plants; "Hand Book of the New Zealand Flora," by Dr. Hooker; "Botanical Magazine," published at Kew since the assumption of Sir Wm. as Director; "The Flora, of British India," by Dr. Thomson, etc., etc. M. C. de Candolle, of Geneva, described the natural order of Peppers for his renowned Prodromus; Dr. Mueller described the "Euphorbraceæ" for the same work, and indeed the most eminent botanists of the day came to Kew to prosecute their advanced studies. In the 25th year of his active and illustrious career the sad death of the great Sir William was recorded thus by the Assistant Director, Sir Joseph Dalton Hooker, his son and successor, "Jan. 1, 1866," in presenting the report for the past year, I have in the first place the painful duty of announcing the decease of the Director, Sir W. J. Hooker, on the 12th of August, and I have to add that on the 1st day of November I was appointed as his successor. This is not the place, nor would it be fitting in me to dwell on the merits of my father; I must, however, claim the privilege of paying a tribute to the memory of my predecessor, as has been unanimously felt to be due to him, viz.: that, whether as the restorer of these Gardens, who by his sagacity and energy raised them above all others in excellence, beauty and utility—or as the originator and founder of museums of economic botany—or as the projector and able assistant of those efforts on the part of our Home and Colonial Governments, that have led to the formations of botanical and horticultural establishments in so many of our colonies, in India and in our foreign possessions, or as the liberal and disinterested patron of private scientific enterprise everywhere, and especially among the officers of the army, navy and civil services,

the late Director of Kew has won the esteem and gratitude of his countrymen, and left a name that will ever occupy one of the most prominent positions in the History of Botanical Science."

With Sir William's demise several alterations in the administration of the Gardens were adopted. The office of Assistant Director was suppressed, and the duties incumbent thereto transferred to the Curator, and the Keeper of the Herbarium and Library, whose offices were, as a consequence, raised. In 1864 John Smith resigned the Curatorship of the Botanic Gardens after upward of 30 years service fraught throughout with rare intelligence and skill. Sir William paid a graceful tribute to his ability and personality in his report to Parliament. Smith's successor was John Smith also, the latter holding office when Sir Joseph abolished the office of Curatorship of the Pleasure Grounds, and consolidated its hitherto duties with those of the Curatorship of the Botanic Gardens, the position henceforth occupied by said Smith.

Colonial expansion at this time was vitally assisted by the introduction of suitable vegetables, fruits, fibre or other utilitarian plants.

In India, progress in Botany and Horticulture was very satisfactory, especially the cultivation of Cinchona; Jamaica, Trinidad, Queensland, the Cape of Good Hope, each received the expert assistance of Kew in determining the most lucrative products the colony could produce. The Ascension Island illustrates a noteworthy fact; "Capt. Barnard's excellent report gives a satisfactory account of the progress of the imported vegetation in this once sterile island, which we continue to supply with plants. It now possesses thickets of upwards of 40 kinds of trees, besides numerous shrubs and fruit trees, of which, however, only the Guava ripens. These also afford timber for fencing cattle yards. I may mention, that when I visited the Island in 1843, owing to the want of water, but one tree existed on it, and there were not enough vegetables produced to supply the commandant's table, whereas now, through the introduction of vegetation, the water supply is excellent, and the garrison and ships visiting the Island are supplied with abundance of vegetables of various kinds."

The onerous duties imposed upon the Director were shouldered with a courage and versatility, and executed with a taste and wisdom that sounds one's greatest admiration. In 1873 a desire was expressed that a more commodious and fire-proof building for the Herbarium and Library for manuscripts and collections of drawings, be provided. In 1876 a pecuniary allowance for such an edifice was included in the usual estimates, and in this connection, through the liberality of Thos. Phillip Jodrell, M. A., the founder of the Jodrell Professorship of Physiology in University College, London, opportunities were afforded for pursuits of investigations in Physiological Botany, £1,500 having been placed at the disposal of the Director for this purpose. Originally it was intended that the building should form part of the group of buildings containing the Herbarium, but the subsequent risk of fire, in consideration of the use of gas and chemicals, determined its site to be detached, a decision that was subsequently carried out.

The Herbarium Building was completed in 1877, and adjoins the old building hitherto employed for herbarium and library purposes. After some alterations internally, the old herbarium was fitted up for a library, a purpose which it has since served. The galleries are

connected with each other, and with the ground floor by two spiral iron staircases, and a large hall 86 feet long, 40 feet wide, and containing two galleries 10 feet wide running around it, the staircases being at each end of the building.

Double iron-proof doors close the entrance to it from the old building; 48 windows light the building, and between these are double cases, 2 tiers high, projecting 8 feet; heating is by hot water.

In 1875 the extensive increase in all the collections, rendered the revival of the office of Assistant Director obligatory, and Mr. W. T. Thiselton Dyer, the present honored Director was appointed to fill the office.

In 1882, with the increasing popular taste for Alpine plants, the small rockery in the "Botanic Garden" was replaced by a more extensive, picturesque and altogether model Rock Garden near the Herbaceous Grounds.

In 1880, the "North Gallery," a pretty red brick building, 50 feet long, 25 feet wide, with an attached studio, was erected at the expense of Miss Marianne North, to receive the 627 colored sketches in oil made by her in most of the tropical and sub-tropical regions of the world, for the purpose of illustrating the aspects and characteristic vegetation of the countries which she visited. Miss North personally supervised the arrangement and hanging of the pictures, grouping those individuals which represented scenes of respective countries. The peak of Teneriffe; the autumnal tint on Niagara's banks; California Sequoias, Arizona succulents, Borneo's impenetrable jungles, aye, India, Java, Japan, New Zealand, Australia, etc., have each memorable and typical scenes treasured by her vivid and skillful pencil. This group was formally handed over to Sir Joseph Hooker on the 8th of June, 1882.

Additionally magnanimous was the act, causing a descriptive catalogue of these paintings to be prepared at her own expense, the proceeds of their sale to be devoted, according to an expressed wish, to the improvement of the small Library, which was kept up for the young gardeners.

Throughout the Directorship of Sir Joseph, the interests of the Gardens were advanced with a zeal, power and momentum that lifted them to a position unrivalled in growth and resource in the whole world. In 1887 the venerable and still active Sir Joseph retired from Government service on the age limit, but only to continue the publication of the Botanical Magazine and Flora India, the latter completed but a few months since. Just here it will be learned with pleasure that the eminent botanical master and explorer is still a frequent visitor to the Herbarium, and occasionally to the Gardens. With his retirement Dr. W. T. Thiselton Dyer assumed the Directorship, and the progress which continually gathers momentum under the present administration, will be subsequently noted. *Emil Mische.*

(To be continued.)

GARDEN PLANTS.—THEIR GEOGRAPHY, XXXII.

ASTERALES.

THE VALERIANA, ASTER AND MUTISIA ALLIANCE.

(Continued.)

In the July issue a very unfortunate oversight of the proof reader led to the substitution of the Rubiales sub-head for that of the Asterales as given above.

The Inuloideæ begins with a monotypic genus from Madagascar called *Synchodendron*; presumably a tree which is not in cultivation.

Pluchea is a genus of annual and perennial often weedy herbs found in most temperate regions other than Europe. Ours are often found on the salt marshes of both coasts. *P. borealis* one of the "arrow woods" is a shrub with silvery pubescent willow-like leaves, growing to several feet in height on sandy banks on the Texas side of the Rio Grande.

Antennaria, one of the genera with "everlasting" involucres, has 10 species in Europe, Asia, North and South America, and Australia. They are often very woolly plants.

Gnaphalium with 100 species has also several "everlasting" kinds, one or other of which are scattered freely over the earth.

Helipterum in 50 species are Australian and South African annuals for the most part. *H. roseum*, *H. Sanfordi*, *H. incanum* and some others cultivated.

Helichrysum has 270 species in Europe, Asia, Australia and Africa.

Many have handsome everlasting flowers known as "Cape flowers" etc. Several are handsome shrubs known in greenhouses as *aphelexis*. *H. diosmœfolium* is in California gardens and many others with yellow, white, pink, purple and red flowers are worth attention for that region. Several of the yellow flowered shrubs from the Mediterranean countries are hardier, and some of the Australian species which have been called swammerdamias are grown in the south of England, together with several silvery leaved and annual kinds.

Phænocoma *prolifera* is a monotypic crimson flowered small shrub from South Africa which may also be adapted to parts of California.

Humea elegans is a monotypic plant from Australia probably useful for the same region. It is treated as a biennial in gardens but should be sown annually, for it is quite effective. It is different in appearance to many of its allies as will be seen by the cut. Its red or pink-brown florets are produced on a large panicle terminating a growth of 6 or 8 feet.

Dimerezia is a little tiny woolly alpine in Oregon with minute purple or flesh colored flowers, immensely different in aspect to the foregoing and yet closely allied.

Inula, "elecampane" has 60 species in Europe, Asia and Africa. They are mostly coarse plants.



GNAPHALIUM
DECURRENS.



HUMEA ELEGANS.

Polymnia in 12 species are North and South American; some have been used in sub-tropical gardening.

Silphium "compass plants" are natives in 11 species.

Iva in about 8 species are North and South American and West Indian "High Water Shrubs." *I. frutescens* has found its way into a few gardens.

Oxytenia, *Dicoria*, *Hymenoclea* and *Franseria* are Californian and Mexican genera of a shrubby character.

Zinnia has 12 species from Mexico and the S. W. United States.

Sanvitalia has 9 species from Mexico and the South Western United States. *S. procumbens* varies somewhat, and is a useful low annual edging plant.



RUDBECKIA LACINIATA, FL. PL.

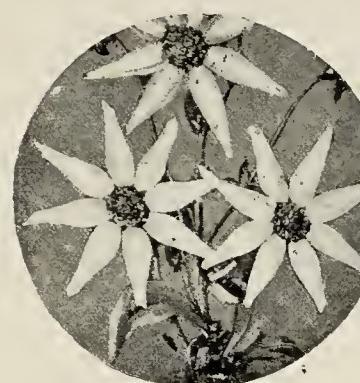
Varilla in 2 species from Mexico and Texas are low shrubs with fleshy narrow leaves and cymes of small yellow flowers.

Montanoa has 14 species mostly Central American and Columbian. *M. heracleifolia* is used as a sub-tropical foliage plant in Europe and in good soil grows to a large size.

Rudbeckia is a genus of 25 species very well named "cone flowers." *R. laciniata* has recently had a double variety brought into some prominence. It makes a good lawn specimen but needs well staking.

Borrichia in 3 or 4 species are fleshy maritime shrubs extending from South America to Virginia.

Helianthus the well known "sunflowers" are in fifty species, natives of North America, Peru and Chili. Several of the perennial and annual kinds are excellent garden plants. *H. cernuus* or *Flourensia cernua* is a shrub found in the arid regions of



DAHLIA, JUAREZII VAR.



DAHLIA, DOUBLE VARS.

the southwest. Two or three *Encelia*s also become shrubby in the same region.

Podachænium is a monotypic Central American genus whose name now seems to be borne by *Ferdinandia eminens*, a tall growing large leaved subject used in sub-tropical gardening.

Coreopsis in 55 species are well-known North American, Sandwich Island and African plants. A number of old genera such as *calliopsis* are now included under this name. *C. gigantea* and *C. maritima* are types of a half shrubby Californian section sometimes known as *Leptosyne*. *Pugio pappus* is still another section of the genus.

Dahlia has probably not more than half a dozen good species, all Central American and Mexican. *D. coccinea*, *D. variabilis* and *D. scapigera* probably, are the species from which the host of double garden forms have been derived. *D. Juarezi* has now been added, and is exercising its influence in the production of so-called "cactus" dahlias. *D. excelsa* grows to 30 feet high it is said, and in California gardens although not so large, flowers finely and often, but chiefly during autumn. *D. Imperialis* with yellow, white and pinkish flowers grows to

10 or 12 feet high. The Marchioness of Bute first introduced dahlias to England by way of Spain in 1789, but as they were single and their management poorly understood, they were soon lost. Seeds were again obtained by Lady Holland in 1804, but it was not until 1814 and from then to 1834, that the fine double varieties were produced which placed the plants upon a secure plane of popularity. The



DAHLIA IMPERIALIS.

cool climate and comparatively frostless autumns of the British Islands is admirably adapted to these plants, and as they soon mature from seed, their improvement has been very popular with gardeners. Occasionally they live well through the winters, but commonly the roots are stored at temperatures above 32 degrees Fah.

On the mountains of Southern India at elevations of about 7000 feet the dahlia has naturalized in the coves, but is invariably single although derived from the double garden forms, which cannot long be perpetuated there. These naturalized flowers vary in color from yellow through three or four shades of crimson, rarely or never scarlet or white. As there is but little published as to the natural dahlia climates it may be well to say that the minimum of temperature where they have naturalized is from 31 degrees on the grass, to 33 degrees or 34 degrees in the shelter of the coves where the plants grow. During January, February and March these low readings are continued o' nights, while the day temperatures with bright sun and nearly rainless skies ranges from 67 degrees to 70 degrees Fah.

From April to November the day temperature ranges from 76 degrees to 67 degrees respectively, and the night temperature from 50 degrees in April to 46 degrees in June to 39 degrees in November. These months from April to November are rainy, the fall increasing from 1-inch in April to 4 or 5 in May, and from 2 inches in July to 9 or 10 inches in September,—October; and then through November rapidly decreasing until December is reached with (usually) none. In such a climate the tops are evergreen—that is they do not die until the next year's growth is well advanced. All this seems to indicate that the Dahlia might be used as a decorative plant in conjunction with Chrysanthemums, especially at northern and mountain points where the summer heats are moderate. The societies promise to bring the Dahlias into prominence again. They will succeed, for the flowers have intrinsic merit, and may be grown in many modified ways to suit conditions and climate; they may even be treated as annuals or biennials, they may be pegged down, or staked up, they may be had very large or very dwarf, very double or single, and their roots are as easy to keep through the winter as sweet potatoes.

Cosmos has 10 species; one or two forms of *C. bipinnatus* has spread into Texas and Arizona, but the centre of production is Central America. Varieties of this plant have become popular with florists at the north as a late autumn flower, and some growers peg the tall growing plants down to the ground, but for ornamental purposes they are best disposed in round beds on the grass, well staked, and edged with Marigolds on some other low growing allied plants.

Trenton, N. J.

James MacPherson.

CEMETERIES OF USE TO THE LIVING.

The late Bishop of Manchester, speaking at a Social Science Congress, referred to cemeteries as "becoming not only a difficulty and expense, and an inconvenience, but an actual danger."

Another sentence with which he began the subject, suggested to me a way of using the occupied part of cemeteries so as to lessen their expense, and by prohibiting a second interment in the same spot, to lessen their danger; as well as in other ways making them still further the contrary of an inconvenience.

The Bishop remarked that when consecrating part of a new cemetery the thought occurred to him that "here was another hundred acres withdrawn from the food producing area of the country forever," and although he added that his own instincts and sentiments were strongly revolted by the idea of cremation, yet it was evident he thought that bye and bye we may be driven to adopt it.

But there are not only instincts and sentiments against cremation, there are several very grave objections to it.

One is the greater immunity of poisoning, in the absence of proof, which would ensue from the destruction of the body so immediately.

Another is the double waste involved; waste, first of the fuel necessary for the consumption; next, waste of the bodies themselves.

It is surely but fair to future generations that when we die we should give back our bodies to the earth whence the nourishment which formed them is derived: since although for some hundreds of years we do not desire to plough over our dead, yet certainly had cremation been the custom only throughout the historic period in this island, its food producing capacity must have been very considerably less even than it now is, when, as the Bishop remarked, we set aside some hundreds of acres for the purpose of burial.

As these islands of ours are limited in extent, it is easy to foresee that if we go on burning all our coal in an ever increasing ratio, and then besides burn our dead and waste all our sewage that should replete the earth, so that we pollute our rivers instead; with our ever increasing population, the England we love, would within calculable time, cease to be habitable; as indeed we have already made most of that portion we call the Black Country—uninhabitable by any who would keep the refinements, the tastes, the aspirations of civilized human beings.

But it might be possible so to arrange our cemeteries, that in giving back earth to earth, we might not only leave that earth to benefit future generations, but even make reverent use of it for the present also.

It is a frequent custom, for those who desire to show love to the departed, to plant little gardens over their graves; why should we not make all our cemeteries into flower gardens? In my younger days there used to be near Exeter some nursery gardens that were one of the chief sights that we took any friend to see who came on a visit to us.

It may be partly because that in my childhood I lived in a street where we had no garden of our own, partly that I had not seen much of the world's grandeur, that looking back now that I know Kew Gardens, the Tuilleries, the Pincio and the Villa Borghese—it still seems as though the grounds of that floriculturist were almost more delightful than any of these famous gardens.

Of course there were none of those straight rows of trees and shrubs, or parallelograms of flowers that one usually associates with the idea of a Nursery garden and which seem designed to make trees, shrubs and flowers look as nearly ugly as it is possible for such pretty things to look: on the contrary they were arranged as to give a whole effect of beauty.

The long smooth walks chequered with light and shade, were full of pleasant surprises of bright flowers, fish ponds, grottos and conservatories, with here and there a seat on which to rest and enjoy it all.

And there seems to have been always a feeling of repose about those gardens, an air of stillness as if all this order and beauty had grown up by enchantment; independently of gardeners and their spades or wheelbarrows: at least there were never any of these prosaic reminders of work about when we were there; probably this may have been from our going there in the evening.

All this is however, only a memory of childhood of which the glamour still remains, partly perhaps because the place itself is no longer in existence. But though I had left Exeter and possibly might never have visited Veitch's gardens again, it was to me as great a grief to hear that they had been sold and done away with, as it was to see that the beautiful old Cathedral had been "restored."

But were those gardens still in existence and were there any possibility of getting buried in them, I would rather think that my body could finally rest there, than in any consecrated ground that I have ever seen.

Not but if my good Bishop had prayed there, I should indeed think that there was an added sanctity, only that I revere the combined beauties of Art and Nature, even more than the sanctity which can be given by prayers of consecration.

Now although floricultural gardens are not usually laid out with any of this regard of beauty, yet doubtless what was done by Mr. Veitch without any reason but his own wish, could be done by other floriculturists also, were a motive given them for so doing.

And stipulations being made for some tolerably beautiful arrangements of the shrubs and flowers, would it not be possible to let all the already occupied part of Cemeteries to nursery men and floriculturists who might do for the whole burial ground what is now done only in little patches by loving hands?

The rental which the floriculturists would pay for the use of the ground would thus lessen the expense of cemeteries, and the necessity of not again disturbing the ground when in use for flowers, would lessen their danger.

But in order to make the ground entirely available for shrubs and flowers, as well as to render it a place thoroughly enjoyable for its restful beauty, it would be necessary to do away with all tomb stones at the graves, marking each spot instead by a small but immovable and imperishable block of granite or whatever material is found best to resist the action of the weather; and on each block a deeply graven number referring to memorial tablets on the walls surrounding the cemetery.

Of course these tablets might vary in size and design according to the desire or the power to pay for them, of the relatives; just as tomb stones are now, but as the tablets would be much better protected and therefore far more durable, it would be much more worth while to make them beautiful.

The memorial tablets might be still further protected by a roof resting on the wall supported on the inner side by pillars forming a cloister or covered walk around the whole of the Cemetery, which when the place of interment were sufficiently near the City, would form a pleasant promenade for the weak and aged in wet weather.

I once spent an autumn in Lucerne at a pension near the Cathedral; on wet days in which no walk was possible with any comfort, I used to enjoy a stroll under the cloister, the walls of which were covered with such memorial tablets to the dead; amongst them being a few oil paintings of Scripture and Sacred subjects. These though not works of high Art technically speaking, were indeed full of the highest spirit of purity and devotion.

This erection of beautiful Cloisters around the cemeteries would form a noble opportunity for the munificence of the rich; as well as afford scope for the development of a phase in architecture of which we have in our country scarcely any examples, though one would have thought such open air shelter not without its uses in this uncertain climate.

Speaking of the objections to cremation, I omitted to touch upon the greatest and most final objection of all, namely, the horror it would add to the already unspeakable dreariness of atmosphere in our great cities.

The sense of never being able to see the clear sky, of never being allowed to breathe the pure air, weighs already on some temperaments to a degree that is almost insupportable; but how much more revolting would be this dreariness, if together with the murky fumes of our innumerable factories, we were obliged to mingle also the idea of the burning dead.

It is no answer to this objection to say that the bodies may, as it is possible, be consumed to an impalpable air; that this particular burning shall be without smoke; since we know that whatever is burnt must in some form or other pass into the air and there would be the horror of it were the fumes never so imperceptible: and would it not be a happier feeling, if instead of being compelled by cremation to associate the dead with the darkening smoke that oppresses our soul;—we might think of them in connection with the bright flowers that earth gives us as one of her choicest blessings? Anna Blundell Martino, Chatterville, Edgebaston, Birmingham, England.

PARK AND CEMETERY.

* PARK NOTES. *

At the annual meeting of the Village Improvement Association of Falmouth, Mass., recently held, the report of the treasurer showed the amount in the treasury to be \$154.38. An appropriation of \$50 was made for the protection and care of trees throughout the village.

* * *

The chain link idea for raising money is being utilized in many ways and for many purposes. In Akron, N. Y., a fountain for the park is desired to cost \$1000, of which only a portion has been secured. To hasten the fulfillment of the project the ladies have undertaken the chain link scheme, and money is coming in fast.

* * *

The Watertown Mass., Historical Society is arranging to have all points of historical interest in the town marked by suitable tablets. It is also proposed to correct misleading tablets which have heretofore been set up in various parts of the town. The society further proposes to take steps to perpetuate the Indian names of the town. These are valuable points of improving interest.

* * *

According to the annual report of Mr. William Doogue, superintendent of public grounds, Boston, transmitted to the mayor of that city, the expenditures were \$97,258.88, not including special appropriations of \$12,930.96. Among the items of expenditures are: \$9,946.30 for city greenhouses; \$21,141.72 for salaries, implements and repairs; \$13,862 on account of Boston Common and \$17,070.70 for Public garden. The balance is charged chiefly to labor accounts for the squares and small parks of the city, South Boston, East Boston, Dorchester, Brighton and Roxbury districts.

* * *

Although the magnificent park plan proposed for the lake front of Chicago is in abeyance for the time being, striking improvements are in progress and the down town section which includes the site of the Logan monument will not be recognized as the Lake Front park of a few short years ago. The Illinois Central Railroad has completed the depression of its tracks and has constructed handsome parapets to its retaining walls, and an appropriately designed station at Van Buren street. A large amount of planting out has been done, and the park is now a transformation scene taking on new beauty each successive season. It is now proposed to name it Grant Park.

* * *

An important feature of the work of the Village Improvement Association is that of Sanitation, and it is noted that its importance is being appreciated. Granting that it is a duty of such association, to become interested in so vital a question of public good, their work will lie more particularly in taking critical notice of such deficiencies and lapses in the precautionary regulations of the town authorities as may be observed, and of using their influence to seeing that such defects are remedied. The intimate relations of such associations with the home life of the community makes it especially appropriate that they should receive suggestions for improvement, and reducing them to practical shape, help the officials of the town towards incorporating them in their government.

* * *

There is a rapidly growing interest in the cause of shade trees, their care and management, and a pretty general suggestion is current that the town and village authorities should include the shade trees among the matters of public welfare in their governing regulations and ordinances. It is certain that the beauty and comfort imparted to a community by its street trees, deserves far more than mere spasmodic attention. Many of our towns are blessed with magnificent specimens of trees, planted

by the forethought of ancestors, but so little have they been appreciated, that frequently not even the decayed or decaying branches have been removed, and in a multitude of cases they have been simply left to run their life uncared for. It is an important matter this question of shade trees, and should be kept to the front in the public interest.

* * *

In talking of the prospects of a Village Improvement Society for Valley Falls, R. I., the *Telegram* of Providence, comments as follows: "These societies are of considerable benefit to the community because they foster in the minds of the people a desire to have their respective properties improved and kept in the very best of condition at all times. In the state of Massachusetts there are a number of such organizations, and if one is desirous of seeing prettily laid out villages, well kept lawns and sidewalks all that is necessary is to take a trip through some of those villages in the summer time. In the village of Hopedale, Mass., the selectmen offer prizes for the best kept property, and there is intense rivalry among the citizens to win the prizes. This scheme has made Hopedale one of the prettiest villages in the United States. The same result could be reached in the Valley Falls if some such inducement was held out to the property holders. All that is necessary is for some one to step forward and start the movement and the society would be a flourishing success from the beginning."

* * *

The design for the Hayes drinking fountain, approved of by the committee selected by the town of Lexington, Mass., was modelled by Mr. Kitson, sculptor, Boston. It is to be erected at the head of the common on the small circular plat facing down Mass. avenue. The model shows a semi-circular rustic stone wall of large field boulders, at the center of which is joined a pedestal to support the figure of a minute-man of 1775. A large boulder is to be hollowed out for the drinking basin for horses, while fissures at the base of the wall, with similar rustic basins, will be provided as drinking places for cattle or dogs. In the semi-circular enclosure seats are provided. The water is to trickle down the face of the rocks into the basins and the whole is calculated to present a rustic, picturesque appearance amid the towering trees, while the rocky formation of the fountain will be suggestive of the stone wall which fronted the British on their visit to Lexington and from the protection of which the minute-men fought so bravely. The entire fountain will be about nineteen feet high. The figure is to be of bronze, nine and one half feet high.

* * *

It is exceedingly gratifying to note how the public press is taking up the subject of art out-of-doors. Mr. E. F. Searles has been very liberal towards Methuen, Mass., his most recent gift being a granite pedestal surmounted by an old anvil. On the pedestal is cut, "Marstons Forge, 1775." The monument marks the site of the old Marston blacksmith shop, where Peter Marston, a soldier of the Revolution, worked at his forge. The monument is located on the plot of land, known as Marston corner, which was also purchased and presented to the town for a park by Mr. Searles. In speaking of this and the natural beauty of Methuen, the *Methuen Transcript* says: "But it is to be regretted that many of us have been far less generous in our treatment of these beautiful places, than nature has been in bestowing them upon us. The destruction of noble trees for a mere pittance, or often from even less worthy motives, the demolishing of beautiful highlands for a few loads of gravel, and the gross misuse of choice parcels of country lands, are cause for much regret to those who admire that which is beautiful in nature. There are many splendid pieces of land on the outskirts of the town which have been richly endowed in natural beauty, but which have been ruined by a homely arrangement of farm buildings or the erection of mere shanties."

CEMETERY NOTES

The Union cemetery trustees, Navarre, O., have removed the last landmark of the cemetery, a large locust tree that has stood for the past 50 years as a shade tree. A local paper says the cemetery now presents the appearance of western prairie land and as such indignant citizens express themselves.

* * *

At the instance of the selectmen of Danvers, Mass., in co-operation with the Improvement Society and private individuals, much needed improvement is being made in the town burying ground. Scores of headstones and markers which were prostrate and broken have been raised and restored as far as possible and set in their bases on top of rock foundations where it could be done; while those so beyond recovery that they cannot be set up again are put together and laid on the ground over the graves. There are many old stones in this cemetery, some dating back nearly 100 years.

* * *

It is hardly to be realized that a town of the importance of Meriden, Conn., should have no receiving vault in its city cemeteries, yet such is the case. The necessity has been brought home to the selectmen, by the fact of a death occurring, in which removal to a distant town was not immediately possible, and actual burial was for the present obligatory. This would have been obviated had there been a receiving vault in any of the city burial grounds. The want of such a public convenience has long been felt, and the incident referred to has awakened the town authorities to action.

* * *

Much improvement is under consideration for Oak Ridge Cemetery, Springfield, Ill. Dr. Henry Wohlgemuth, who has retained the confidence of the city authorities through many reappointments to the office of president of the board of managers, has recently returned from a trip of inspection of many of the leading cemeteries, and is zealous in the object of keeping up the improvements of the cemetery to the most recent practice. Oak Ridge has now over 2000 lot owners, comprises some 110 acres in area and has a total of about 12,500 interments. The Lincoln national monument is in Oak Ridge cemetery and attracts many visitors to the beautiful grounds.

* * *

In a report just made by the landscape architects relative to the development and maintenance of Aspen Grove cemetery, Ware, Mass., occurs the following on the subject of cemetery trees: "Evergreen trees should be used very sparingly if at all, and where now of mature growth they should be reduced in number to single isolated specimens or small clumps, thus admitting the sun and giving the desired warmth to soil and vista. Deciduous trees can be planted much more freely than evergreens, but the elm and willow must be left out entirely on account of the immense root growth which attaches to both these varieties. Oaks, maples and poplars with a rare beech make a good selection for cemeteries. While one hesitates to sacrifice trees that are well grown, this step is yet absolutely essential in many cases, and if the work is properly done, will add materially to the attractiveness of the grounds. It is often desirable to plant young trees close together, but always with a clear understanding that they are to be removed later."

* * *

One of the most honored graves in the Congressional Cemetery at Washington is that of the Choctaw Chief Pushmataha, whose influence with his race in the early years of the republic

was of inestimable value. His tombstone is of sandstone, once white, but now dark, with age. It is a rectangular block, about four feet in height, resting on a pedestal and surmounted by a pyramid. The inscription on the north side is as follows: "Pushmataha, a Choctaw Chief, lies here. This monument is erected by his brother chiefs, who were associated with him in a delegation from their nation in the year 1824 to the General Government of the United States." On the south side of the monument appear these words, from a eulogy pronounced upon him in the United States Senate by John Randolph, of Roanoke: "Pushmataha was a warrior of great distinction. He was wise in counsel, eloquent in an extraordinary degree, and on all occasions and under all circumstances, the white man's friend." On the east side is the statement that "he died in Washington on the 24th of December, 1824, in the sixtieth year of his age." On the west side is his pathetic request: "When I am dead, let the big guns be fired over me."

* * *

Among the enactments of the last legislature of New Jersey was an act amending section 8 of the law of 1875 relating to the incorporation of trustees of religious bodies. It provides for the purchase, holding, conveying and disposing of real estate which the denomination taking advantage of the act may deem necessary or expedient, but for religious purposes only, and it also provides: That it shall be lawful for such religious society to hold, and also to convey and dispose of land, not exceeding fifty acres heretofore conveyed to such religious society for the purposes of a cemetery and a burial of the dead, and to sell the same in lots or plots for the burial of deceased persons, subject to any and all laws of this state governing cemeteries and the burial of the dead and to devote the moneys derived from said sale to the laying out, care and maintenance of said cemetery or burial ground, and for no other purpose, and when the moneys received from sales of lots shall be in excess of the wants of such religious society for the proper care and maintenance of its burial grounds, it shall be lawful to invest such surplus in safe and suitable securities, and the interest derived therefrom shall be devoted to the care and maintenance of its burial grounds, and for no other use.

* * *

The report of the 54th year since the charter was granted the Allegheny Cemetery Corporation, Allegheny, Pa., dated June 29, 1898, is just issued. According to this document, the invested capital of the cemetery now amounts to \$471,750.21 to which is to be added the lot owner's endowment fund of \$47,254.42, a gain in the invested capital for the year of \$25,437.85 of which \$11,244 is due the endowment fund,—an amount in excess of any year since 1860. The total revenue for the year was \$58,850.66, which included \$17,245 from sales of lots. The total expenditures were \$38,320.39. Although 91 lots were sold as against 47 of the previous year, the average price per lot was only \$190.60 as against an average \$449 for the previous year. With the exception of the lot sales there was an increase in receipts in all departments over last year. The estimated cost of the monuments erected during the year was \$88,000, which included 22 monuments, 79 tombs, 331 head marks, 2 vaults and 5 sets of steps. They were 884 interments during the year making the total number in the cemetery 40,457. A number of fences, curbs and other enclosures were removed, and indications are that a very few years will witness the removal of all these objectionable features from the grounds. As is the general observation in the majority of improved grounds the native forest trees are rapidly disappearing, over 400 having been removed for cause during the year. To replace these as far as possible 300 deciduous trees of different varieties and 500 evergreens were planted.

PARK AND CEMETERY.



Cemetery Improvement.

FAIRHAVEN, MASS.

Editor Park and Cemetery.

DEAR SIR:—To trouble your readers with the history of Riverside cemetery would be to tell once more the oft told story of the rural or the suburban cemetery: suffice it to say, that near the middle of the present century the people of Fairhaven found it necessary to provide themselves with a new burial ground: a corporation was formed; a beautiful site of about 12 acres was purchased, laid out, and donated by a generous citizen.

Upon the opening of the cemetery, lot holders assuming all the rights of individual proprietorship removed the bodies of deceased friends from other cemeteries and interred them upon their own lots in the new cemetery without the slightest regard to future requirements as to the keeping of records.

Riverside cemetery is essentially a village cemetery, it is admirably laid out to suit the contour of the land. For the most part the paths cross the sections in parallel lines 33 feet apart, one rod being considered a sufficient amount of land for a family lot. One part of the cemetery, the designer, in order to develop the natural beauty of the landscape, arranged in smaller sections of irregular shape; these lots were generally taken by the wealthier inhabitants and thousands of dollars were spent in enclosing them with iron fences, which, although they are gradually finding their way to the scrap iron depot, would seem at the time of their erection to be a necessity, as at that time the neglect by some neighbor to replace the bars of the rail fence might result in the cemetery being invaded by cattle, while stories are often told of huckleberry gathering, quail hunting and other sacrilegious and lawless expeditions in the cemetery.

The earlier settled parts of the cemetery are somewhat overcrowded by well grown arbor vitæ trees, which the lot holders in ignorance of the habits of growth of the arbor vitæ planted freely and allowed them to take their own sweet way. In these parts of the cemetery we sometimes find the remains of worn out rose bushes and shrubs growing in a border now overgrown with weeds and grass, showing where some have, in days gone by tried to make a little paradise of their last resting place, the owners have gone by now as well as the days, the shrubs they planted still struggle to hold their own and the lily-of-the-valley runs riot over the immediate neighborhood.

The above description may doubtless be adapted to numerous rural or suburban cemeteries, but the main question, which is before and not behind us and which particularly concerns the working superintendent is, what can be done at this late period to correct so far as possible the mistakes of former years and to meet the requirements of the times?

It is in the hope rather to obtain, than to impart advice to my fellow working superintendents, that I intrude upon your columns, but I may add that during the past winter the grounds committee with the superintendent have made a special effort to interest individual lot holders in the care of their lots and have met with tolerable success.

T. White.

* * *

Removal of Bodies from Unpaid for Lots.

Mr. G. W. Riely, secretary and superintendent of Grove Hill Cemetery, Shelbyville, Ky., writes as follows in reply to the question in the July issue concerning burial in an unpaid for lot and subsequent refusal to pay for same: "I some years since suggested to cemetery companies to put the matter in their charters and they would have no trouble in removing the dead and reselling the lots. I send you a copy of our laws and rules in which you will find the following which covers the case:

"The said board of Trustees shall also have full power to enter upon any lot or lots within the said Cemetery Grounds, for which the holder has neglected or refused to pay for more than one year, and remove therefrom the remains which may have been interred thereon: *Provided*, That before such entry and removal, the parties interested shall be duly notified that such action will be had if the purchase money for the lot or lots and the expenses incurred thereon are not paid within one month from date of service of such notices; and *provided, further*, that the remains so removed shall be interred by the Trustees or their agents on a plot of ground set apart by the Board of Trustees for general burial purposes; and the lots so entered upon, and all other lots in the Cemetery of said Company not paid for within one year after purchase, shall revert to the said Corporation and be subject to resale by the Board of Trustees."

LEGAL.

EVADES THE CONSTITUTIONAL QUESTION.

Appeal was taken, in the case of the Forest Cemetery Association against Constans and others, from an order appointing a committee in proceedings instituted under the provisions of section 3096 of the Minnesota General Statutes of 1894 to acquire by condemnation land for the enlargement of a cemetery. But the supreme court of Minnesota holds that such an order is not appealable. The reason it gives is that the statute expressly provides that the decision of the court upon the report of the committee shall have the effect of a judgment, so that, upon an appeal from the judgment, any intermediate order, such as this one, necessarily affecting the judgment may be reviewed. In other words, the court says that the order does not involve the merits of the action; it does not, in effect, determine the action; nor is it a final order affecting a substantial right in a special proceeding. It simply appoints a committee to examine and report as to the merits of the petition, and the damages to be awarded, and is no more appealable than an order appointing a referee. But it was suggested, on the argument before the supreme court, that inasmuch as the question of the constitutionality of the statute authorizing cemetery associations to exercise the power of eminent domain was an important public question the appeal ought to be disposed of on its merits. This led the supreme court to further state that it, for obvious reasons, ought not to decide any appeal upon the merits when it is clear that there is no case before the court, especially when so grave a question as the constitutionality of a statute is presented. This leaves the constitutional question an open one, in Minnesota, for future litigation.

* * *

THE POISON IVY CASE.

Mrs. Barbara E. George, who was awarded \$3,875 for damages received from poison ivy while placing flowers on the grave of her husband in Cypress Hills Cemetery, Brooklyn, New York, had the judgment reversed on appeal of the corporation before the Appellate Court. The suit was for \$10,000. Judges Goodrich, Cullen and Bartlett held against Judges Woodward and Hatch that the verdict should be set aside. Judges Bartlett and Cullen expressed the opinion that corporations are expected to exercise reasonable care. They questioned the power of the courts to decide whether ivy is poisonous, since it affects persons differently. Judge Woodward held that as poison ivy is a detriment to public health, and the cemetery authorities were responsible for the welfare of those having a right in the cemetery, the judgment should stand. The defendant corporation was sustained and a new trial ordered.

Selected Notes and Extracts.

Landscape Gardening at the World's Fair.

In commenting upon the architectural and landscape gardening features of the World's Fair, Professor Bailey recently brought out several points of general application.

One of the most charming features of the White City was the idea of bringing in the blue waters of Lake Michigan, thus giving the three elements of a picture as the landscape artist sees it; architecture, vegetation and a water view. And the gondolier, with his sable craft, gave to the new Venice something of that indescribable charm which clings to the old. It was a stroke of genius.

The wooded island was the grandest conception of the whole. After the surfeit of sight-seeing, here was a bit of nature, quiet and restful as she always is, yet so simple. Not all the rare and curious things in the Japanese garden, nor the florist's cannas so conspicuously displayed to public view; nor the multitude of other interesting sights necessarily carrying with them an air of artificiality and constraint; not all these could draw people from this little bit of wild-wood. Americans are nature lovers. Though they may be led to adopt unnatural methods of home adornment out of misconception, yet are they quick to see the difference between their own and Nature's way, and to appreciate a skillful reproduction of the perfect pattern. Therein lies the secret of the landscape gardening art.

Another happy combination was the skillful way in which the terrace was employed to carry out the architectural design. Too often the terrace is but a bank of earth, surrounding a house like the outworks of a fortification, and having no special adaptation to or connection with the architectural features of the building. As used by Mr. Olmsted it became a part of the building, and greatly heightened the imposing appearance of the perspective. This was brought about by placing the terrace close to the building, and connected with it by a narrow railing along the crest of the escarpment. The terrace thus appears as the foundation, and cannot be separated from the architectural design. Similar effects may often be produced by planting a row of hedge-plants along the crest, sufficiently dwarf as not to obscure the base of the building while yet connecting it with the terrace. No intermediate planting is desirable, except close to the building, near such alcoves or recesses as offer a favorable opportunity for mass

effect. To place a flower bed between the railing and the building spoils the picture. We have now two objects, the terrace and the building, where before was only one. Let the green sward have full sway. It is better than a legion of cannas or geraniums for a place like this.

But aside from these points of special interest, the nature-lover found many gems of landscape gardening art scattered judiciously through the White City. Marvelous was the luxurious vegetation which two years had developed. Harmonious was the blending of colors with environment. We do small justice to the magnitude of the undertaking till we catch a glimpse of the means and methods. How many thousand cars of prairie soil it took to build this garden one would not venture to assert. The swamps and glades were robbed of their choicest treasures. Tribute was laid the country over and was collected. From every section came some quota to swell the heterogeneous mass, which in the hands of the expert, resolved into most admirable disposition and adaptation. There were imperfections, it is true, but as a whole, it was a masterpiece.

Throughout the talk Prof. Bailey paid admiring tribute to the genius of Frederick L. Olmsted, whose keen foresight and sound judgment, resulted in this harmonious setting for the mighty structures.

—S. W. Fletcher, Ithaca, N. Y.

* * *

Shaded Highways.

Trees add beauty and comfort to every country road.

During these hot summer days is when the traveler on a dusty, treeless highway, sighs for some boundless contiguity of shade, or at least for good roads bordered by trees whose sheltering boughs would offer some protection against the rays of the celestial scorcher, the sun.

Trees add more than beauty to a country highway, although that feature alone should be sufficient incentive to insure their presence; but they are comforting, as well, and their shade helps to retain a degree of moisture that retards the making of dust.

The usual highway should be made beautiful and comfortable as well. Every negligent highway commissioner should be compelled to ride a wheel along a sun-blistered road, or, better yet, be harnessed to a load, as is the poor dumb horse. This would bring him to a realization of the fact that a little shade along the road is a good and gracious thing. Make the highway beautiful.—*Fred Lawrence in Rural Californian.*

* * *

A correspondent in the *New England*

Florist, from Chicopee, Mass., says: Many of the beautiful shade trees seem to be suffering, and some have already died from some cause. Many persons lay it to the gas, which they claim has escaped from the gas mains and poisoned the roots, while others think that it is due to the gypsy moth and the elm tree beetle. Although it is probable that in some cases the gas is responsible for some of the trees, in other places where there are no gas mains or pipes, trees are dying. Nearly all of the elm trees have suffered from the elm tree beetle, and around the roots of the trees large piles of worms may be seen. In many cases tarred paper has been tacked around the trunk of the trees, but this seems to be of little value. It has been suggested by many of the prominent citizens of both villages, that the city take a hand in stopping the nuisance and killing the bugs and beetles as other cities in this vicinity are doing. In Springfield the city has purchased a tree sprayer, and in this way the trees are being saved. If Chicopee should not wish to purchase one of these, it has been suggested that it rent one, or hire one by the day, with men who are experienced in the use of the machine.

* * *

Propagating Conifers.

Of all ornamental trees and shrubs, possibly there are none easier to propagate from cuttings than most varieties of conifers. What I find to be the best system of propagation, is to insert cuttings (taken with a heel of the wood) in sand any time from the end of October to the first of January. They can be placed in a cool house or pit, and by the end of March they will be found to be calloused, and with a slight increase of temperature they will soon throw out roots. They can be potted into two and three inch pots. Some time in May they can be planted in nursery rows, in good garden soil, outside, and transplanted every year afterward until they attain the proper size for the object in view.—*Robert Williamson, in The National Nurseryman.*

* * *

The Crimson Rambler rose at Rea Brothers Norwood, Mass., had 235 bunches, each bunch averaging 50 blooms, making a total of 11,750 blooms in the plant.

* * *

The trees in Somerville, Mass., are dying from the effects of the arc lights, says the *Somerville Journal*, and it recommends putting a heavy and larger shade over the lights, so that the trees will have a chance to sleep.

PARK AND CEMETERY.

Association of American Cemetery Superintendents.

G. W. CREEZY, "Harmony Grove,"
Salem, Mass., President.
ARTHUR W. HOBERT, "Lakewood,"
Minneapolis, Minn., Vice-President.
F. EURICH, Woodward Lawn, Detroit, Mich.
Secretary and Treasurer.

The Twelfth Annual Convention will be held September 13, 14, 15, at Omaha, Neb.

The American Park and Out-Door Art Association.

CHARLES M. LORING, Minneapolis, Minn., President.
WARREN H. MANNING, Tremont Building,
Boston, Mass., Secretary.
E. B. HASKELL, Boston, Treasurer.

The next meeting of the Association will be held at Detroit, Mich.

Publishers' Department

Park Commissioners and Cemetery trustees are requested to send us copies of their reports.

Photographs and descriptive sketches of interesting features in parks and cemeteries are solicited from our readers.

The Omaha Convention of the A. A. C. S.

Members of the A. A. C. S., who anticipate having their ladies or families accompany them to the convention at Omaha, should notify J. Y. Craig, chairman executive committee, Omaha, so that suitable rooms can be reserved for them. This becomes necessary owing to the crowded condition of the Omaha hotels during the exposition. *Executive Committee.*

* * *

In connection with the approaching convention of the American Association of Cemetery Superintendents, to be held at Omaha, Neb., September 13, 14 and 15, the executive committee have sent out a circular to cemetery officials generally, urging the advisability of sending a delegate to the convention at the expense of the cemetery. The association has now 150 members embracing nearly every state in the union. Among other things the committee says:

"The work that the Association has done in the past eleven years, through their meetings, and their paper, 'THE PARK AND CEMETERY,' cannot be overestimated. We have seen the old stereotyped country burying ground which received merely two or three cleanings a year, perfectly transformed, and this transformation was brought about by one or more of the trustees, or managers, attending the meetings of the Association. We believe you are desirous of making the most of what you have at hand, in the govern-

ment and development of your cemetery, and we know of no better way for you to accomplish this than to send your superintendent to the convention, and that at the expense of the cemetery. We have abundant evidence that those who have done so heretofore have been rewarded far beyond their expectations. At the coming meeting there will be papers read by practical and experienced men on such topics as are constantly arising in the management of cemeteries, parks, etc.

A very pleasant feature of the Cemetery Superintendents Convention is the exhibit of photographs, models, etc., made by the visitors. It is suggested that those who attend the Omaha Convention take with them photographs of entrances, buildings, specimen trees, shrubs and such subjects as will possess some practical value. Much of the suggestive detail is lost in photographs that cover too great a range.

An invitation has been received from the Henry A. Dreer Co., of Philadelphia to attend the Fourth Annual Excursion given by that firm to the Florists and Gardeners of Philadelphia and vicinity to visit their nurseries at Riverton, N. J., on August 16th. This has become an annual outing of great interest, carried out from beginning to end with liberal and considerate hospitality and is always keenly enjoyed by the participants.

Mr. William Lyon, the gate-keeper at Mt. Auburn cemetery, is probably known to more people of Cambridge, Mass., than any other man says *The Press*, of that city. "He has occupied his present position for a period dating back beyond the memory of most people. The superintendents have been changed several times since he entered the service of the corporation, and also many of the other officials, but Lyon still remains. He is one of the old standbys of the place. Winter and summer, in pleasant weather and in storm, he is to be seen daily in or about the grounds. He takes great pride in the neatness of the flower beds and lawns, and is always pleased to show visitors about the beautiful grounds, pointing out all the places of interest to them. Many persons visiting this city in years past have carried away with them pleasant recollections of his kindly attention to them."

RECEIVED.

From F. W. Chislett, Supt. Crown Hill Cemetery, Indianapolis, Ind. A photograph of the handsome Thompson-Starr monument, in the grounds.

Rules and Regulations, Wauseon Cemetery, Wauseon, O., 1898. Illustrated with half tones.

President's Report, Allegheny Cemetery, Allegheny, Pa., June 29, 1898.

Superintendent's Report, Allegheny Cemetery, Allegheny, Pa., June 29, 1898.

Thirteenth Annual Report of the Maine Agricultural Experiment Station Orono, Me., for the year ending Dec. 31, 1897. The report contains a large number of papers on subjects of vital importance to agriculture, and much that enters into the economy of our surroundings. The efforts being made at all the state agricultural stations to investigate into the conditions, welfare, and culture of valuable plant life, and in contrast the control of what to-day appears to be noxious in that domain of nature, is a grand feature of our general educational privileges. Allied to this also is the work on insect pests which is receiving well deserved attention and from which good results are accruing. The present report contains an interesting paper on "Ornamenting Home Grounds," by W. M. Munson.

Thirty-sixth, thirty-seventh and thirty-eighth annual reports of the Board of Park Commissioners of the City of Hartford, Conn., for the years ending April 30th, 1896, 1897 and 1898 respectively. These reports are liberally illustrated with full page half tone engravings.

CATALOGUES.

Special list No. 2. Seeds of Woody and Herbaceous plants collected and offered by Pinehurst Nurseries, Pinehurst, N. C.

Fruitland Nurseries, Augusta, Ga. Fruit and Ornamental Trees, Roses, etc. P. J. Berckman's Company, Augusta, Ga.

* SITUATIONS WANTED, ETC. *

Wanted a position as Cemetery Superintendent, with several years' experience, best of references as to character and ability. Am now in charge of Incorporated Cemetery. Address American, care of PARK AND CEMETERY.

Thoroughly competent Cemetery Superintendent desires engagement. Experienced in every particular. Satisfactory references. Correspondence solicited in regard to remodeling old grounds, making additions, etc., "Landscape," care PARK AND CEMETERY.

Wanted—By Englishman care of grounds, cemetery, park or public institution. Experienced in all branches. Landscaping a specialty. Florist in Tennessee Centennial Exposition. Silver medal and diploma. First class references. Address with terms etc., W. F. JOSOLYNE, Vernon Avenue, West End, Nashville, Tennessee.

PARK AND CEMETERY.

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CONTENTS.

EDITORIAL—THE TWELFTH ANNUAL CONVENTION OF THE A. A. C. S.—FUNERAL REFORM—IMPROVE THE SCHOOLYARD—THE STATUS OF THE LANDSCAPE ARCHITECT.....	121, 122
*ANNUAL CONVENTION OF THE CEMETERY SUPERINTENDENT'S ASSOCIATION.....	123
OUR ASSOCIATION—ITS OBJECT AND WHAT HAS BEEN ACCOMPLISHED.....	127
WHY NEW CEMETERIES SHOULD ADOPT THE LAWN PLAN.....	128
*THE HENRY GEORGE MONUMENT, GREENWOOD CEMETERY, BROOKLYN, NEW YORK.....	129
*IRIS VERSICOLOR AND ITS NEIGHBORS ABOUT THE POND.....	130
*SCENE IN FAIRMOUNT PARK, RENOVATING OLD TREES, ETC.....	131
*GARDEN PLANTS—THEIR GEOGRAPHY, XXXIII.....	132
ROYAL BOTANIC GARDEN, KEW, SURREY, ENGLAND, 134	
PARK NOTES.....	136
CEMETERY NOTES.....	137
*SOME SPECIMEN TREES AND SHRUBS.....	138
CORRESPONDENCE	139
SELECTED NOTES AND EXTRACTS.....	140
PUBLISHER'S DEPARTMENT.....	141

*Illustrated.

THE Twelfth Annual Convention of the Association of American Cemetery Superintendents, held at Omaha this month, and of which a full report is given in other columns, had its own particular significance and value, besides its progressive fulfillment of the aims and purposes of its organization. Mr. O. C. Simonds in opening his paper on "Our Association—Its Objects, etc., " stated that object to be education, and a review of its yearly work clearly shows decided progress in that direction. The efforts of the earnest men in the calling, realizing what association truly means—interchange of experience, discussion of possible improvements either in office, management, or on the grounds, opportunities of inspecting the cemeteries of fellow members under the most favorable circumstances, and mutual acquaintance, implanting a personal factor in the rivalry of effort to secure the best results—foresaw that education in a most practical form would result. Several lessons were

quite clearly suggested in the course of the meeting, one of which and a most important one, as regards the development of the cemetery, was that cemetery superintendents should cultivate a sense of the beautiful. This might appear to pertain too much to the domain of the ideal in the eyes of the ordinary practical superintendent, but that would be the wrong inference to draw. The landscape gardener must possess that sense to a greater or less degree to pretend to assume the title. The very term suggests the possession of that faculty, and just so far as a superintendent is imbued with, or develops, that sense in the course of his work, just so refined and beautiful will be the creations of his intelligence in his landscape effects. Study nature closely, drink deeply of the knowledge which she offers to the student, and imitate in a certain sense such of her efforts as will be most desirable for the situations it is proposed to improve.

* * *

Another important suggestion is the value of enlisting the interest of people not connected with cemetery affairs, with the endeavor to induce them to attend the meetings. At several of the conventions of recent years the interest added to the annual gatherings by the presence and practical help of outside people of education and experience has been most pronounced. The work of the cemetery superintendent in many respects calls for some of the experience and knowledge of other callings, professional and commercial, and it is a matter, decidedly educational, while at the same time fraternal, to cultivate and extend the courtesies of the association on opportune occasions. It is reciprocal in its effects too; for the work of the superintendents will naturally become better appreciated, the knowledge being disseminated by intelligent and sympathetic workers in other lines of usefulness, and respect and reverence for the cemetery will ultimately supplant the carelessness which now marks so many localities.

FUNERAL reform is rapidly taking practical shape. Its advocacy is finding apostles among the most prominent of church dignitaries, and it is matter of comment how much there is now found in its present practice to condemn, not only on account of the immorality of ostentatious parade, the undue expenditures by those of moderate means, the inconveniences and

PARK AND CEMETERY.

disturbing effects on others, but the final efforts to preserve the body from the natural decay which the immutable laws of nature decree must sooner or later occur. So that now that funeral reform has become, if we may use the term, a live issue, every phase of the subject is attracting attention, and becoming the object of attack from every source crediting itself with authority to speak on the subject. It is to the credit of the cemetery authorities that practical work in this direction owes its inception to them. The steadily increasing sentiment against the Sunday funeral has found practical expression in the new rules of many prominent cemeteries, prohibiting, so far as it may be judicious, burials on that day. In the present effort to reform funeral practices and observances, and to bring such functions into accord with enlightened public opinion, it is possible that the cemetery may yet again be an important factor. When the opinion has crystallized concerning the desirability, upon sanitary grounds, of allowing mother earth to have access more readily to our lifeless remains, and so to carry out nature's laws in her own beneficent way, cemetery rules will quickly follow to keep in step with the march of a higher intelligence.

THE more one sees of the forlorn looking school yard the less becomes the doubt as to the possibility of there being children in our cities' slums who have never seen the green grass, and this is reported as fact by many of the devoted laborers in such vineyards. It is somewhat difficult to realize in our great United States that, with its wealth of plant life and prairie, the bare and barren school yard in our cities, to say nothing of our country places, could possibly exist. Yet the lamentable fact remains that very little attention has until the present time been given to what is termed "nature study" for the young, and that bleak, and bare, and uninviting school yards are yet the rule and not the exception. Arbor Day has already awakened a vast interest all over our land, and its possibilities are still in their infancy. It is to be hoped that as each appointed day comes round one of the special observances shall be the planting of the school yard, where appropriate. And while this is a guarded term, it is difficult to believe that any school yard exists where a little planting or a stretch of lawn could not be made available for much good. We urge park and cemetery officials, both, whenever proper so to do, to exercise themselves to the utmost in lending a hand in this great and good work. Left to the school authorities or teachers alone, the best results are not probable; zeal can never take the place of

skill and experience. But hand in hand with local experts in planting, school authorities with teachers and scholars, can transform their surroundings into gardens of instruction and delight. Where school funds are available, an expenditure for professional advice will give large returns.

EVEN the intelligent are apt to underrate the status of the landscape architect or gardener, as he may choose to style himself, and in one sense this is chiefly due to association. The difference in the necessary qualifications between the designer of a park and the man who sets out the planting material is seldom considered by the casual observer, that is to say the public generally, and the landscape designer and the gardener are placed in the same category. The phenomenal growth in material things of the country has not been conducive to a development of the faculty of discrimination, where thinking, outside of personal interests, is demanded for a proper classification of qualifications. It is from this cause that we read of numbers of banquets and public gatherings, carried out to mark the completion of great undertakings, wherein the financial problem involved in success is the only theme worthy of mutual admiration; while the genius, the professional skill, the unrequited devotion to labor and study which went into the design and carrying out of the work is entirely overlooked. This is a common experience which, however, happily in time reacts. The same experience is common in our public park affairs. We are constantly noting what this or that park commissioner has done or is doing, but very little about the man who is developing the work to the best advantage, and by oftentimes rare skill and acquirements, creating effects impossible but for that individual skill and acquirements. The more one considers the work of park and landscape development the broader appears the field of knowledge and experience required for its successful practice. Then add to this the fact that a deep artistic sense must be the especial gift of the landscape designer, and we have the fundamentals of a profession of high degree. It is gratifying to think that the field for this profession, rapidly coming to the front, is a broad one, which will offer improving and increasing opportunities as the years roll by. Like the other constructive and developing professions of this country, it will grow in importance in public estimation, on the one hand when its members become united in aims and interests and consequently assertive, and on the other when a little more leisure is a part of the individual and collective life, giving opportunity and inclination to extend habits of thought beyond the personal domain.

**ANNUAL CONVENTION OF THE CEMETERY
SUPERINTENDENTS ASSOCIATION.**

The Twelfth Annual Convention of the Association of American Cemetery Superintendents was held at the Dellone Hotel, Omaha, Neb., September 13, 14, and 15. Pleasant weather, an excellent programme and an attendance fully up to expectations with the added pleasure of the opportunity of visiting the Trans-Mississippi Exposition made the occasion very enjoyable throughout.

At the opening session Divine blessing was invoked by Rev. LeRoy S. Hand of Omaha, and a most cordial welcome was extended to the superintendents by Mayor Frank E. Moores. At the conclusion of his witty address the mayor presented President Creesy with two golden keys tied with red, white and blue ribbons. On one of the keys was inscribed the mayor's telephone number to be used in case of an emergency which happily did not arise. In replying President Creesy presented Mayor Moores with a china cup and saucer from Salem, the city of witches, as a souvenir of the occasion.

The President read his annual address which was as follows:

Ladies, Gentlemen and Friends of the American Cemetery Superintendents Association:

It is with very great pleasure that we welcome you to this, our Twelfth Annual Convention. I shall not attempt to give you a summary of what we have accomplished during these years, for the first speaker on the programme has that assigned to him, and I am sure that he can give you a more graphic account, and also our beloved Father Nichols, will speak for all of us on "The pleasure we take in seeing our work expand." And there has been and will be, such a quantity of helpful knowledge for the benefit of all, that I feel inclined to speak especially to the new members, and to say just a few words of kindly advice.

First, try to visit as many cemeteries as you possibly can during the year, or on your way to and from the Convention. Second: While there, ask all the questions you like for you may be sure of their being answered to the best ability of the superintendent. Thirdly: Remember no two cemeteries are situated alike, and if the grounds you represent, may not be one of the Modern Lawn Cemeteries, go home determined to make of it just the very best you can.

I offer these suggestions from personal experience in many visits. I think I have gained a great deal of knowledge that could have been had in no other way. Consider if you will, Swan Point, Providence, R. I., where a large amount of natural beauty with the genius of its superintendent, has given us one of the prettiest spots, and the new outer wall recently completed is the most unique boundary one ever saw, and I only hope you will all see it some day in the near future.

A visit to Calvary, St. Louis, proves what may be accomplished, with much patience and perseverance on the part of the superintendent.

Pine Grove, Lynn, Mass., where rich and poor are treated with squal respect, and a look at this Cemetery would prove that its superintendent puts his whole heart into his work.

At Rochester, N. Y., we see the ideal modern ground where only monuments are to be seen: all grave markers and

corner posts are placed even with the grass. Perhaps some here will recall, when this plan was brought to our attention, very few thought it would be possible to carry it into effect, but one visit there will prove what a beautiful view it is, to stand at the entrance and look down over the ground.

Those of us who remember Spring Grove, Cincinnati, as we first saw it ten years ago, and compare it with its beauties of last season, realize what a marvelous improvement has been going on and we believe perhaps, something of this may be due to the influence of our Association.

It has been my pleasure to visit the cemeteries of Dayton, Toledo, Cleveland, Akron, Columbus, Ohio; Syracuse, Rochester, Troy, New York; Newark, N. J., and many others, and from each of these visits, I at least have learned one good point. Let us remember that we are very young, only twelve years old, yet much has been done for burial grounds.

In many of our old cemeteries, lots have been sold, and no provisions have been made to care for the same. Should we, as superintendents be satisfied with this state of affairs today, and let these lots disgrace the new, and modern idea of Perpetual Care? No! We should all try to find the original owners, or some one of their representatives, and if possible prevail upon them to place the old family lot under perpetual care, and by so doing we can in a short time renovate these old sections, and in a few years, we can have our old grounds in keeping with the parklike cemeteries of to-day.

In the State of Massachusetts during the last sessions of the legislature six new charters were granted for the incorporation of new grounds, and if this is true of our old and somewhat smaller State, how much more thought must have been given to the same subject, by our newer and larger Western States?

In passing, shall we not stop a moment to remember our brave boys of the Maine, that were laid to rest at Havana in February, others at Santiago in June, although these graves are few in number, shall we forget them?

Their epitaph the best of all
In hearts and song and story—
"Remembering their country's call
They died for good Old Glory!"

And now, uniting with you in congratulations, upon your prosperous condition and the promise of future progress, as I close my labors as your president, I wish at this time to express my appreciation of your great kindness to me and to thank the Executive Committee, who, while endeavoring to arrange matters satisfactorily to all, have guarded our Association's interest, with great tact and ability, and so it will be our duty to maintain this present state of efficiency, and endeavor to improve it. Although we may fill various offices, let us remember we are all brothers together.

May the bond of friendship be strengthened, the harmony of one noble purpose, run through all our acts, so that united in work, friendship, purpose and zeal, we shall earn and receive from our various communities, "Well Done."

In the annual report of the Secretary and Treasurer, Mr. Eurich referred at some length to the advisability of making an effort to enlist the co-operation of all cemetery officials and thus extend the influence and good work of the association. This he thought was possible by a change of name, the present title of the association being such as to conceal the identity of all officials not superintendents of cemeteries. The present limited membership he attributed largely to the "restricted name" and only a bright and prosperous future could result from the

adoption of a name that would imply the eligibility of any cemetery official to membership.

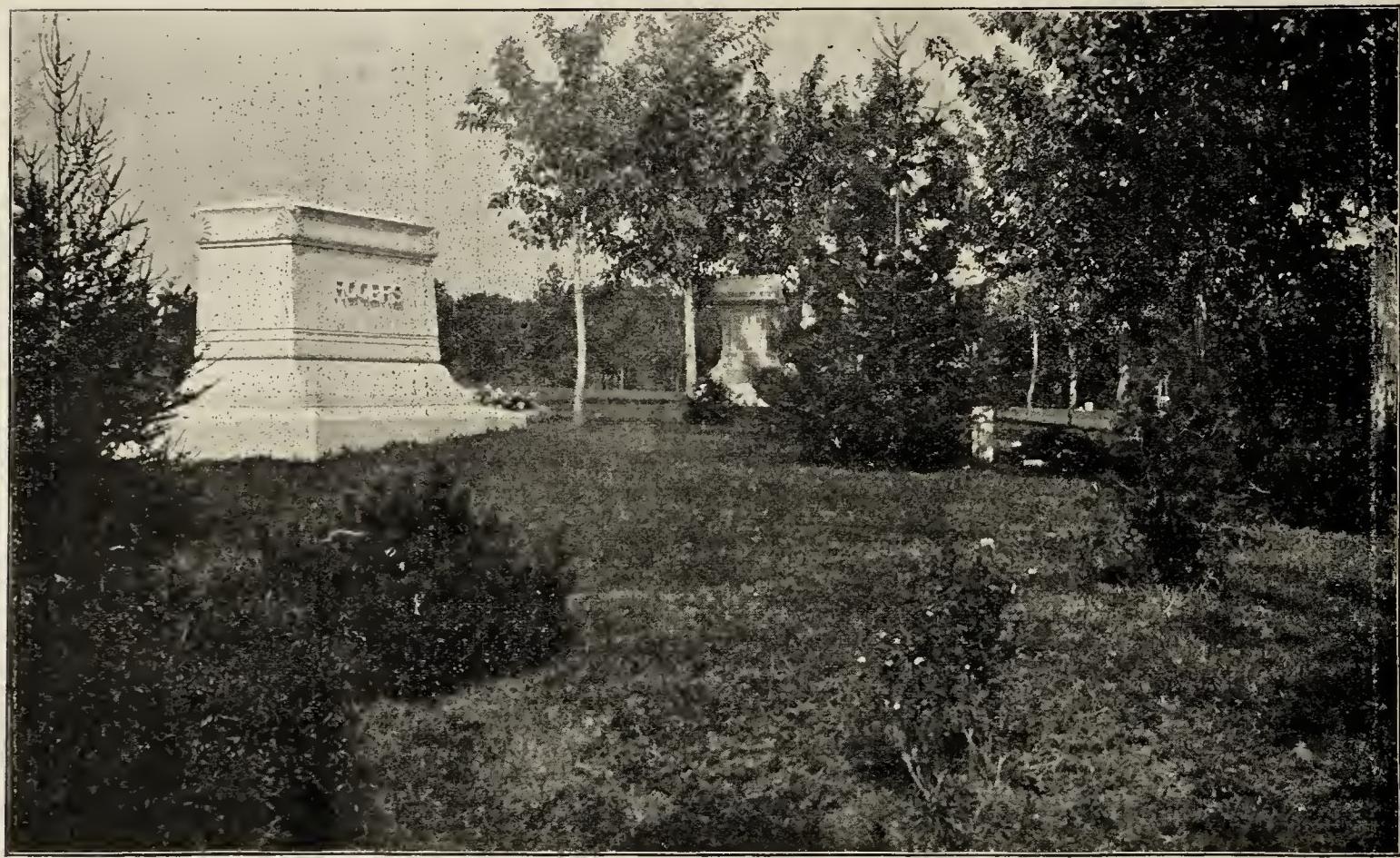
The suggestion was discussed at a subsequent session and a motion to change the name of the association was lost.

The Treasurers report showed that the financial affairs of the association had been carefully managed, there being a very substantial balance in bank.

At the afternoon session papers were read as follows: "Our Association, its Objects and What has been Accomplished," by O. C. Simonds, Chicago; "Why new Cemeteries should adopt the Lawn Plan" by A. W. Hobert, Minneapolis,

The collection of paintings by old masters to be seen here has but few equals in the United States, while the curios from all parts of the earth that adorn every nook and corner of the beautiful home are of unusual interest. The hospitable host responded in a very happy vein to an address of thanks by Mr. G. H. Scott. Among the works of art that he thought of peculiar interest to cemetery superintendents, were two well preserved marble statues that were used to adorn a Roman tomb 2,000 years ago.

A birds eye view of Omaha and the surrounding country from the High School grounds ended the



VIEW IN FOREST LAWN CEMETERY, OMAHA, NEB.

Observe the absence of high grave mounds, lot enclosures, etc. Corner posts are flush with the surface.

Minn; "What Trees and Shrubs are Suitable for Cemetery Embellishment," by Bellett Lawson, Wilkes Barre, Pa. The first two papers are printed on another page. Mr. Lawson's paper was quite exhaustive in the list of trees and shrubs suitable in certain localities of the United States based on personal experience. He thought every cemetery should have its own nursery where by experimenting, the superintendent could soon determine what shrubs were best suited to the locality. "It is better to prove the success or failure of a shrub in the nursery than in the cemetery proper."

A visit to the art gallery of Mr. J. A. Lininger was a most pleasing diversion for the afternoon.

very pleasant afternoon's outing.

At the evening meeting the Rev. S. Wright Butler, a Congregational clergyman of Omaha, delivered an admirable address on the subject of "Sunday Funerals." He regarded funerals on the Sabbath as a sin against the day; it is the day of days that should speak to us of life instead of death, but he did not look for any marked degree of reform in this direction until there had been reforms in many other objectional forms of Sunday desecration. It was voted by the association to have this address printed for distribution among lot owners.

Other papers read during the evening were: "The Importance of System in Cemetery Manage-

ment," by H. J. Diering, Woodlawn, New York, and "Cemetery Records," by Frank D. Willis, St. Paul, Minn.

Second Day.

"The Importance of Large Bodies of Water in the Landscape, Natural or Artificial, in Cemeteries or Parks," was the subject of an interesting paper by George H. Scott of Chicago. "It is generally conceded he said, that our most beautiful landscapes are those composed of expansive bodies of water connected with natural woodland scenery. A well devised lake, with its shady trees and artistically grouped shrubs, becomes not only a thing of beauty but a cool and quiet retreat where man may rest and meditate on the peaceful surroundings and be led to higher, brighter and nobler thoughts."

Mr. Matthew P. Brazill's "Review of the Cin-

growth of trees, the broad and gracefully designed driveways, and the commanding views of the landscape for miles around, created a most favorable impression on the visitors. The cemetery is situated five miles from the city and is conducted on the lawn plan. It was incorporated in 1885 and the first burial was made in the fall of the following year; the interments to date aggregate 6,000. Forest Lawn is the only cemetery in the state operated on the mutual plan, all lot owners being stock holders. Mr. J. Y. Craig, the very competent superintendent is also a member of the board of trustees. With the anticipated street railway facilities, Forest Lawn will become more accessible to the public and will in time exert a helpful influence over the cemeteries in the adjacent towns and villages.

On returning the party stopped at the residence



VIEW OF FOREST LAWN CEMETERY, OMAHA, NEB.
Giving a general idea of its undulating surface.

cinnati Meeting," was a comprehensive resume of the delightful convention held in that city last year. He referred in most complimentary terms to beautiful "Spring Grove" and emphasized the salient features of the papers that were read.

The afternoon was devoted to visiting Prospect Hill and Forest Lawn Cemeteries, carriages having been provided for that purpose by the local committee. "Prospect Hill" the old city cemetery contains 16 acres inside of the city limits. It is situated on the summit of a hill overlooking the city and commands a fine view of the surrounding country. Supt. Callahan has induced many of the lot owners to dispense with their fences and other lot enclosures and is sanguine of soon ridding his well kept grounds of the few that remain.

"Forest Lawn" with its 320 acres of beautifully undulating land, affords an almost ideal site for a cemetery. The sloping hillsides dotted with natural

of Mr. and Mrs. Craig where refreshments were served. The tables were spread upon the cool and inviting lawn and a two-fold feast enjoyed, for while doing ample justice to the good things provided for our physical enjoyment, we feasted our eyes on the beauties of nature that spread themselves before us up and down the Missouri Valley to the bluffs in Iowa miles away. This was a most enjoyable event and the courtesy of the host and his family will long be remembered.

The papers read at the evening session were: "Driveways, their construction and maintenance," by Prof. George R. Chatburn, State University, Lincoln, Neb., and "Aquatic Plants and other Flowers in our Cemeteries," by William Stone of Lynn, Mass. Prof. Chatburn classified the cemetery roads and driveways under four distinct heads: Dirt; Gravel; Macadam and Pavement, and dealt with the problems of designing, construction and mainten-

ance in a very practical manner. He laid particular stress upon the importance of drainage and recommended the adoption of a rule that all wagons for carrying tombstones or other heavy material should have tires 4 or even 6 inches in width. In his interesting paper, Mr. Stone made a plea for a more liberal use of the old time favorites of our grandmothers gardens and gave an exhaustive list of aquatics that could be easily grown in ponds.

A letter was read from Mr. Charles Nichols, Newark, N. J., expressing his regret at not being able to attend the convention and reciting some of his efforts to make the meeting a success in point of attendance.

Third Day.

Two papers were read at the closing session of the third day, viz: "The Importance of Placing our Cemeteries under Perpetual Care" by George M. Painter, Philadelphia, Pa., and "The Advantages of the Lawn System in Cemeteries in our Western States," by S. W. Rubee, Marshalltown, Ia. "Truly Perpetual Care has done much and will do more for our cemeteries," said Mr Painter, "the advantages are manifold. It was a grand idea and will be a grander monument to the one who conceived it, than any ever created from stone."

Judge C. A. Baldwin, President of Prospect Hill cemetery, Omaha, made an impromptu address to the convention in which he extolled the association for the good work it was accomplishing.

The nominees for officers for the ensuing year were as follows: For President, A. W. Hobert, Minneapolis, Minn.; George H. Scott, Chicago; for Vice-president, William Stone, Lynn, Mass., Matthew P. Brazill, St. Louis, Mo.; for Secretary and Treasurer, F. Eurich, Detroit, Mich. The ballot resulted in the election of Messrs. Hobert, Stone and Eurich.

New Haven, Conn., was chosen as the place for holding the next annual convention and the following members were appointed on the executive committee: Frank A. Sherman, "Evergreen," New Haven; Robt. Scrivener, "Cedar Hill," Hartford, Conn.; T. McCarthy, "Swan Point," Providence, R. I.

Appropriate resolutions were adopted on the death of Mr. Lindsey J. Wells, formerly superintendent of Greenwood cemetery, Brooklyn, and the first treasurer of the Cemetery Superintendents Association. Mr. Wells died at his home in Brooklyn, Aug. 8.

Mr. Craig, presented each of the members and their friends with tickets of admission to the Trans-Mississippi Exposition, where the afternoon and evening of the closing day of the convention was passed very pleasantly.

THE QUESTION BOX.

The Question Box was unusually productive of timely topics on various phases of cemetery work which were profitably discussed.

"Is it an advantage for a superintendent to live on the grounds?" The prevailing opinion was in the negative. Near the grounds, but not on them, was thought to be best.

The discussion of the interesting subject of "Perpetual Care" developed the impracticability of cemeteries adopting a uniform system of charges, owing to the variety of conditions to be considered. In a cemetery conducted strictly on the lawn plan, the cost of caring for lots is considerably less than where lot enclosures and the promiscuous use of iron and stone work is permitted. Perpetual care in some cemeteries applies to the care of grass only, in others to grass, shrubs, trees, etc., and in some instances it is made to cover the care of the monumental work as well as everything on the lot. Provision is made for the cleaning of monuments, etc., and if need be, their repair in the event of disintegration. The rate of interest on which estimates of income was based, varied from 3 per cent. to 6 per cent; the former being regarded as the safest. Several members spoke of the good results accomplished by issuing circulars to lot owners, calling special attention to the perpetual care plan. In a number of cemeteries, signs are used to designate the lots under perpetual care; they are made of iron, and when placed close to the ground are not so conspicuous as to be objectionable. Mr. Rudd doubted whether corporations were justified in contracting with laborers to do certain work extending so far into the future, considering the fluctuating interest, changing labor conditions, etc., upon which perpetual care agreements are contingent.

The Sanitary question of the pollution of water in cemetery wells brought out some interesting information. In Rosehill cemetery, Chicago, there is a well in close proximity to several thousand bodies, the water of which has been frequently analyzed and found to be uncontaminated. It is the best of drinking water and in daily use as such. Several other cemeteries have wells which show no signs of contamination.

Elms were considered objectionable for cemetery planting, at least on burial sections, because of their spreading fibrous roots. The roots often spread much farther than the branches. As an ornamental tree the white elm was highly recommended.

Rules governing the stone work in cemeteries are becoming more strict. "Mt. Greenwood," Chicago, prohibits the use of sandstone, blue

marble and similar material. "Forest Hills," Kansas City, Mo., forbids the use of sandstone bases under marble or granite monuments. Designs of vaults and monuments have to be submitted to the cemetery authorities in many places. Where brick, marble, slate or other underground grave vaults are used, they are, as a rule, put in by the cemetery.

Among the cemetery superintendents and other officials in attendance at the convention were: G. W. Beckel, Defiance, O.; A. W. Blaine, Detroit, Mich.; W. J. Blain, San Francisco, Calif.; J. M. Boxell, St Paul, Minn.; M. P. Brazill, St. Louis, Mo.; H. Bresser, Toledo, O.; W. C. Buchanan, Belleville, Ill.; R. D. Boice, Geneseo, Ill.; J. F. Boerckel, Peoria, Ill.; J. Y. Craig, Omaha, Neb.; Geo. W. Creesy, Salem, Mass.; D. C. Callahan, Omaha, Neb., E. G. Carter, Chicago; G. J. Chaffee, Syracuse, N. Y.; Frank Eurich, Detroit, Mich.; A. L. Glaser, Dubuque, Ia.; A. J. Graves, Bloomington, Ill.; L. C. Glazier, Pueblo, Colo.; C. W. Foster, Council Bluffs, Ia.; Sid. J. Hare, Kansas City, Mo.; Wm. Harris, Allegheny, Pa.; A. W. Hobert, Minneapolis, Minn.; J. R. Hooper, Richmond, Va.; S. C. Hahn, Iowa; George A. Harvey, Belleville, Ill.; J. H. Fawell, Lincoln, Neb.; M. M. Jones, Newport, Ky.; R. J. McKee, Des Moines, Ia.; W. A. Morrow, Hillsboro, O.; G. C. Naylor, Wilmington, Del.; S. Olsen, Calumet, Mich.; G. M. Painter, Philadelphia, Pa.; John Reid, Detroit, Mich.; S. W. Rubee, Marshalltown, Ia.; Geo. Ruff, Lincoln, Neb.; W. N. Rudd, Chicago; O. C. Simonds, Chicago; Geo. H. Scott, Chicago; G. Scherzinger, Fon du Lac, Wis.; F. A. Sherman, New Haven, Conn.; W. Stone, Lynn, Mass.; John Saulter, So. Omaha, Neb.; R. H. Thorne, El Paso, Tex.; D. Woods, Pittsburg, Pa.; W. B. Wormley, LaFayette, Ind.; T. H. Wright, Covington, Ky.; Mr. Lyle, Pittsburg, Pa.; C. A. Baldwin, Omaha, Neb.; R. J. Haight, PARK AND CEMETERY, Chicago. The ladies present were: Mesdames, A. W. Hobert, G. M. Painter, E. G. Carter, and Misses Simonds and Beckel; Master G. Bertram Creesy, Salem, Mass.

OUR ASSOCIATION—ITS OBJECT, AND WHAT HAS BEEN ACCOMPLISHED.*

The object of our Association is the same that it has been since the adoption of the constitution eleven years ago. It has been spoken of many times in our meetings, and when it was assigned me by the Executive Committee I objected to it as being trite. The answer was that the audience would be partly new and should have the work of the Association explained to it. I will, therefore, give some thoughts which have been presented at previous meetings, but will endeavor to put them in new shape. Stated very briefly, the object of our Association is education. We come together to learn, to hear each other's experience, to get new ideas, hoping thereby to improve the cemeteries committed to our charge. We come also to see, as well as to hear, and just as a visit from friends stimulates a household to put its home in order and improve its appearance, so does our meeting at any given place stimulate the cemeteries at the place we visit to make improvements and show examples that will benefit us. This stimulation is a good thing for the people visited, as well as for those who come to see them. The mere fact of exchanging visits and of expecting criticism will help to elevate the character of cemeteries. In the meetings that have been held, almost every subject has been touched upon. Much has been said condemning the practice of erecting so many monuments and large headstones; the efforts to preserve dead bodies; the barbarous method of conducting fun-

erals; the planting of weeping willows, and the custom of wearing mourning and making things look gloomy. We have come to look upon cemeteries as places that should stimulate cheerful and comforting thoughts, places that will lead us to admire beautiful trees and shrubs, the sweet songs of birds, the quiet landscapes, and thus draw our thoughts away from sad reflections. We have advocated private funerals, which should be more in accordance with our instinctive desire for seclusion at a time of grieving, and in line with this thought have opposed the custom prevalent in many places of endeavoring to have funerals held on Sunday. I fear our discussions along these lines have had but little influence, but I hope they have had some effect. I am more and more convinced that the greatest practical good resulting from our meeting will be the general increase of knowledge in regard to how cemeteries can be made beautiful. The pictures to be formed are more under our control than any other feature of a cemetery. These result not only from the general plan of the cemetery, but from all the little details, the shaping of the ground, the location of the planting, the trimming or lack of trimming, the character of the tree, or shrubs selected, the effect of soil upon them, the condition of the lawns, the size of lots, the rules adopted, especially those regulating monuments and headstones, and the provision made for perpetual care.

We come to learn how to do grading, planting, road building; we come to learn how to make lakes, lawns and boundaries; we come to get acquainted with the various forms of plant life; we come to learn the best method of keeping records and taking care of all the various details connected with a modern burial place. We come also to listen to what may be said by those outside of our calling, and I think we have been very fortunate in having had an opportunity to listen to lawyers, professors, engineers, and other people of education and refinement.

If a cemetery superintendent performs his duties properly he must be a lover of nature, and he will get hints not only from the cemeteries and parks he may visit, but also from the country and roadside vegetation, the margins of streams and lakes, and the woods which he may pass on his way to the convention city.

During the past eleven years the object of our Association, as stated in the constitution and as I have endeavored to explain it, has been constantly kept in view, and the testimony given each year tends to prove that much benefit has been derived from our meetings. There are a few, however, who claim they have learned all that can be taught at our gatherings. One cemetery superintendent, who has never been to our meetings, said that he had read our reports and our monthly paper, and that he had seen nothing in them that he did not know more than thirty years ago. His cemetery, however, was defective in many ways, and I am glad that so conceited a man was not a native of this country. It may be true that some of our members have, as they claim, learned all there is to know but, even then, it would be kind of them to attend our meetings and help those less fortunate. The influence of our Association is shown by the unanimous approval now given by our members to the "landscape lawn plan" first adopted and carried out at Spring Grove, Cincinnati, by Mr. Strauch. Its influence is always exerted in the direction of greater simplicity, greater economy, greater beauty. A central idea in regard to the cemetery as a

*Paper read at Omaha Convention of the Association of American Cemetery Superintendents, September, 1891. By O. C. Simonds, Chicago.

burial place should be that in its perfect form it is a quiet, peaceful resting place as beautiful as the "Garden of Eden."

WHY NEW CEMETERIES SHOULD ADOPT THE LAWN PLAN.*

As it is a generally accepted fact that the lawn plan should be adopted in all new cemeteries, I will endeavor to give a few reasons why it is so.

By the term "lawn plan," I mean a cemetery in which the aim is to simplify the grounds as much as possible by prohibiting all needless encumbrances, such as fences, hedges, stone posts and chains, and in fact lot enclosures of all descriptions; where the headstones or markers are limited in height to a very few inches, or still better, kept level with the sod, where all flower planting is confined to the spaces reserved for that purpose, and lot owners are not allowed to exercise their own sweet will and taste as to floral adornments on their lots, and where all graves are sodded level with the surrounding ground.

Going still further I would restrict the size and number of monuments, and make duplication of design a legal offense, but of course these are matters which are difficult to control, though I hope and believe that in time they will be adjusted through the education of the people in our line of work.

Presuming that all cemeteries sell their lots, including perpetual care (and no other way), it is plain that they should be on the lawn plan, as the cost of maintenance under this plan is decreased from one-third to one-half; the men mowing the grass have a clean lawn to work on and are not obliged to stop, back up and take a new start every 15 or 20 feet, as when working on a lawn obstructed by fences, mounds, etc. Again, there is a saving in time when they come to trimming around the markers and graves, in fact there is but little of this work to do, as the lawn mower has cut it all clean, except close to monuments, and nearly all work with shears and sickles is avoided. In watering, the hose can be handled much more easily than when the ground is obstructed with mounds, markers and fences. All these items are good ones to consider when calculating the cost of maintaining a piece of ground, and will certainly make a good showing at the time of making the annual report. Another feature in the financial part of this question is the saving in platted ground. Under the old plan a strip from two to four feet wide had to be left around each lot, which could not be utilized for burial, while on the lawn plan burials can be made close up to the lot line, which means a saving of from 15 to 20 per cent in land where lots are platted as they are in the cemetery which I represent.

The great reason, however, why the lawn plan should prevail is because cemeteries on this plan are much more beautiful than on the old go-as-you-please style. In our cemetery we have quite an object lesson, and it has done wonders toward educating our lot owners, and others as well.

As you enter the cemetery at the main entrance the first platted ground you come to is about four or five hundred feet in. This section is conducted as nearly

on the lawn plan as any piece of ground I know of; no markers allowed above the surface of the ground, no flowers planted except in vases, no mounds above the graves, and in fact no obstructions of any kind on the lawn, except the family monuments, and trees, and shrubbery. Directly ahead of this section is one on which the markers were allowed any height and style, and graves were mounded and planted with flowers. As one looks across the new on to the old section the contrast is so great that it is noticed and remarked upon by a great many people, and is the means of causing changes in other parts of the cemetery very often. While the old section referred to is by no means as unsightly as a great many I have seen, when compared with the new one it shows up badly. The new section is a neat, green lawn, broken only by the monuments and a few trees, while the old one stares at us with hundreds of small stones of every conceivable size, shape and color, not one of which can present any just claim to being a work of art, graves planted with geraniums, coleus, and all the gaudy plants known to floriculture, without any regard to making a pleasing contrast or combination with surrounding work, and a few mounds, dry and brown, just for variety.

To persons of good taste the lawn plan must appeal very strongly, and while there is a strong sentiment against the rules necessary, it is because people dislike to get out of the rut, and it is gradually growing less.

During a recent trip East, I was told by the superintendent of a large cemetery which I visited, that they had in one case graded down level a lot belonging to quite a prominent lady of their city, and upon receiving notification that the work was completed, she came out to the cemetery, and drove directly to where she supposed her lot was, but the change in appearance of that vicinity was so great that she thought she had got to the wrong place, and came to the office to be directed right. So pleased was she over the change that she says now that if the management wish people converted to the lawn plan to send them to her. The very fact that nearly all cemeteries where "any old style" was good enough, are being altered and worked over to conform as nearly as possible to present ideas, should be sufficient of itself to deter any one from opening new grounds on any but the strict lawn plan.

The progressive people of to-day, as a rule, want the best there is to be had, and are going to have it, even if they have to die to get it.

Green gutta percha is now produced from the leaves of the caoutchouc tree and is said not only to possess all the advantages of the article obtained by incision into the stem, but even to excel it in durability, so that it can enter into use industrially and commercially in a hitherto unknown way. It is readily prepared and cheap in price, not requiring an expensive purification, which heretofore increased the price of the product 15 to 25 per cent. Besides it is highly plastic, very strong, can be divided into the thinnest leaves and receives the most delicate and at the same time the most distinct impressions, by molding and pressing. Moreover, it withstands the action of water and the strongest acids and even in a worn and broken-up condition is still worth 25 per cent of its cost of production. The French mail and telegraph department has already commenced its use for the construction of submarine cables.

*Paper read at the Omaha Convention of the Association of American Cemetery Superintendents, Sept. 13-16, 1898. By A. W. Hobert, Lakewood Cemetery, Minneapolis.

THE HENRY GEORGE MONUMENT, GREENWOOD
CEMETERY, BROOKLYN, NEW YORK.

A very interesting monument, both on account of its own merits of design and execution, and the great public esteem in which Henry George was held is the memorial erected to his memory and recently unveiled in Greenwood Cemetery, New York. The sad circumstances attending his sudden taking off, in the midst of the greatest struggle of his life for purity in politics, gives the monument additional value as a memorial, and imparts to it a sentiment of veneration befitting the really great life it serves to commemorate.

The proposition for the memorial found expression immediately after his death, and it was at once decided that it should combine the qualities of simplicity and impressiveness, and the design illustrated herewith was the result. Dark Quincy granite and bronze are the materials of construction. Its principal dimensions are: die, 4 ft. 5 in. by 1 ft. 3 in. by 7 ft. 8 in. high, which is set in a base, 7 ft. 11 in. by 4 ft. 5 in. by 1 ft.

3 in. The face of the die is a sunken polished panel, at the upper corners of which are attached bronze wreaths, bearing within one the words, Born Sept. 2, 1839, and within the other, Died Oct. 29, 1897. On a pedestal, Ionic in style, rising from the base on the face of the panel, is a bronze bust, modelled by Richard George, sculptor, a son of the illustrious deceased, which is said to be and naturally ought to be, a perfect likeness of his father. On the face of the pedestal is the name Henry George.

The entire work has a classical and dignified appearance, with attributes of substantiality and durability, well calculated to remind the observer of the character and work of the great economist it memorializes.

A curious feature of life in the great black forest of Europe is the number of memorials of a pious character that are to be found along the highway and in private gardens. At first sight the

stranger is apt to mistake them for unconsecrated graves. Any remarkable event in the life of a Black forester of substance is thought to be worth signalizing in a similar fashion, while pious sentiment is often expressed by the erection of a figure of Christ on the cross. Within a space of 500 yards have been noted as many as half a dozen of these quaint structures in wood or stone, some in a deplorably battered and weather-beaten condition.



THE HENRY GEORGE MONUMENT, GREENWOOD CEMETERY,
BROOKLYN, NEW YORK.

Aii extraordinary discovery, and one which is just now exciting considerable interest in antiquarian circles in Lancashire and Cheshire, has been made at Stockport. During the excavations in the construction of sewage works for the town some workmen came across what has since proved to be a massive oak tree, with two immense branches. Professor Boyd Dawkins, the well-known antiquary, is of opinion that the tree is one of the giants of prehistoric times, and he says that the tree is certainly 10,000 years old. It is supposed to weigh about forty tons.—*London News*.

IRIS VERSICOLOR AND ITS NEIGHBORS
ABOUT THE POND.

Iris versicolor L.—larger blue flag—stem stout, angled on one side; leaves sword-shaped; ovary obtusely triangular, with the sides flat; flowers short-peduncled, the funnel-form tube shorter than the ovary; pod long turgid, with rounded angles. This is the botanical description of our common flag, abundant in wet places everywhere. Its introduction to gardens is not of recent date, though one rarely meets with this beautiful perennial outside its native haunts. Its semi-aquatic nature does not prevent it from taking a place in the perennial border where water can be administered occasionally, but its home and proper place is at the margin

the boggy shores the pretty flowers of Lady slippers rules supreme among pitcher plants and a host of other moisture loving friends; across the water at the edge of a small island the flowering rush of Europe — *bustum umbellatus* — with its large umbel of rosy flowers shows well above the grassy border to be seen from quite a distance. On another islet several varieties of our native phloxes rule supreme. *Potentilla fruticosa*—shrubby cinquefoil—gracefully hanging over the wateredge will soon produce its numerous golden flowers and still be in good condition when *Hibiscus militaris*, *H. moschentos*, also several varieties of aster, sunflowers and marsh marigold that uninvited have made their home at the water edge will be in their glory. From



LILY POND AND RUSTIC BRIDGE, HUMBOLDT PARK, CHICAGO.

of a rivulet or pond. A large clump of blue flags half covering a rock at the water edge is a sight to behold, or in a nook mingled with rushes and sagittarias, sending its grand blue flowers through a clump of white waterlilies. What grander combination could be found in its season and still in another place a little around a slight curve, waving softly in the morning breeze, the Iris waves to its happy neighbour, *crambe cordifolia*, that sends its panicles of white flowers way above the heavenly blue of the flag. But there are other kinds of nature's children that help to decorate the artificial lily pond. Here the Robins plantain—*Erigeron bellidifolius*, stretches its naked stem covered with pinkish flowers above a number of cypresses and carexes causing envy to the surroundings, and yonder on

the last named ones we have learned a lesson and they are welcome friends nevertheless. *Sympythium officinale* finds here a happy home in close quarters with Rhubarbs, funkias, *Hemerocallis*, *Tritomas*, *Eryngium*, *Eulalias*, *Elymus*, *Caltha palustris*; and further out in the water, Tall reed, cattails, bullrushes, spike rushes, *acorus*, *Calamus*, mingling in harmony together. Near the woodland at the water edge a plant of *Polygonum Sachalinense* seems to enjoy itself, and on the bluffy approach to a boulder bridge the mullein is showing its pretty spike of a multitude of tiny yellow flowers, where close by a plant of *Rosa multiflora* with its wreath like branches of white embraces a rock, and so I could mention a score of others that have been given a home along the margins of our lily pond. Jas. Jensen.

SCENE IN FAIRMOUNT PARK. RENOVATING
OLD TREES, ETC.

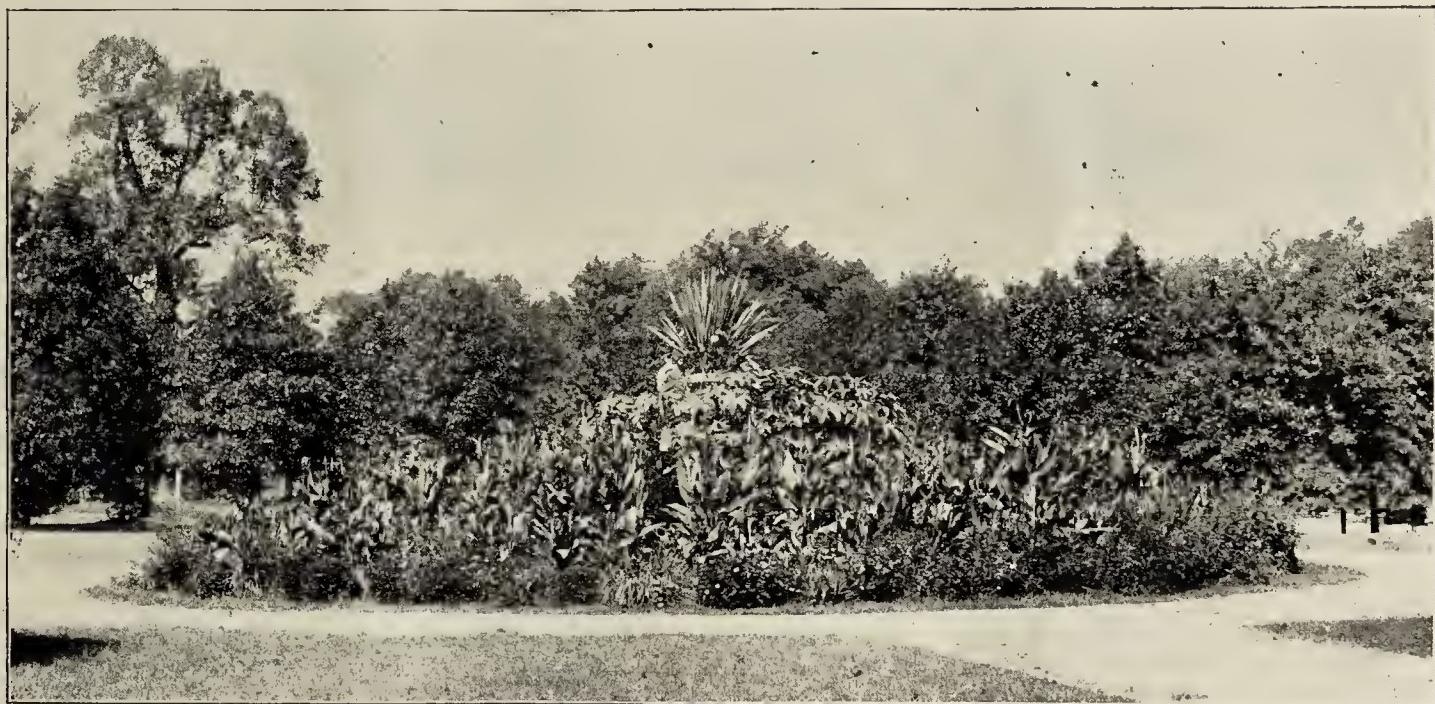
Fairmount Park, Philadelphia, is a beautiful place, as many of your readers who have seen it know, and those who have not been there have had glimpses of it through the medium of the photographs presented in PARK AND CEMETERY from time to time.

The greater part of the park contains natural woods, and much of the planting of former years has grown to fine proportions. These trees, grouped as many of them are, permit of the placing of flower-beds where their beauty will be brought out the best, and such a spot has been found for the

ing flourishing tree, good for many years to come.

Mr. C. C. Miller, the superintendent of the horticultural department of the park, is an enthusiastic advocate of the pruning in of old trees. In his report to the Park Commission, speaking of the dying out of some large trees he says: "The tramping of millions of feet during the summer months around the trees wears away the grass and top soil from the surface roots, and causes the loss of the rainfalls by washouts. These things should be guarded against, for trees deprived of food and drink cannot thrive."

Further on, referring to the same subject, he says: "The life of most of these fine old trees can



A CANNA BED. FAIRMOUNT PARK, PHILADELPHIA.

bed of cannas which the illustration displays. As will be observed, the bed is not wholly of cannas. The outside of it contains scarlet sage and a few mixed plants, then the cannas, next the castor-oil plant. The vase which surmounts the whole contains the variegated New Zealand flax, *Phormium tenax variegata*.

Such beds as this are much sooner in good display in summer if the plants be forwarded somewhat. Those who keep their cannas dormant until they plant them out make a mistake. The plants should be started and advanced early, that when they are planted the leaves may be already of large size. Such plants bloom soon after being planted, whereas if not so treated summer is often well advanced before it occurs. The same is true of scarlet sage. Good sized plants will flower almost from the start, in strong contrast to what is usually seen.

The large oak tree on the left is one which, being an old tree, and not flourishing well, had its limbs well pruned back, and to-day it is a fine look-

be prolonged almost indefinitely if proper precautions are taken. Trees do not often die of old age if all the conditions are favorable to their requirements. Many fine old trees which have been pruned as recommended have taken on new life, and are now splendid examples of what can be done by an intelligent system of pruning."

Certainly the tree displayed in the illustration is flourishing, and in much better shape every way than some which have not been so treated. Care would have to be taken that where limbs were shortened in the scars were painted or in some way protected from rains, or rot would set in, which in time would end the tree.

Mr. Miller's idea if I follow him aright, is that this pruning back of old trees is an heroic measure. He would prefer that the trees be fed as of old by the decaying of leaves, grass and other vegetation, or lacking this, by artificial means. For many seasons this has not been found practicable in this park, hence the practising of the cutting back of the limbs.

Many persons claim the cutting back of large trees hastens their decay, but this occurs only when the scars are unprotected from the weather. Then moisture finds its way to the heart of the tree, and decay does set in.

Joseph Meehan.

GARDEN PLANTS.—THEIR GEOGRAPHY, XXXIII.

ASTERALES.

THE VALERIANA, ASTER AND MUTISIA ALLIANCE.
(Continued.)



COSMOS BIPINNATUS.

Bidens and Cosmos are nearly related through the yellow rayed species of the latter. *Tagetes* "Marigold" has about 20 species. Two are found within our borders, the rest are Mexican, Central and South American. Two or three species and their varieties are well-known and reliable annuals, and one at least of the perennial kinds is known in California gardens as the "shrubby marigold"—probably *T. lucida*.

Chrysactinia Mexicana is a monotypic low growing plant with heath-like terete leaves and yellow rayed flowers. It is found in New Mexico and Texas.

Helenium has 18 species in North and Central America. *H. autumnale* and some others are in gardens.

Gaillardia is in 8 species from temperate parts of North and South America. Gray and others describe more than this number, but then our herbariums are confessedly destitute of connecting material. Gaillardias have become quite popular, and in the southwest of course they are quite at home.

Achillea is credited with 100 species in Europe, Asia and North America. Several double and other forms are grown. *A. Ægyptica* is shrubby.

Santolina with 8 species are from Mediterranean regions. *S. chamaecyparissus* is a silvery leaved hardy little shrub often used as a bedding plant.

Chrysanthemum including pyrethrum and several other plants as sectional types has had 130 or

more species described, but they are probably capable of much reduction. They are principally found in temperate Asia, Europe, North and South Africa, and in North America. The yellow and white Ox-eyes are quite familiar, and others are being naturalized. *P. roseum* is reported as doing finely in California gardens, and it would not be very surprising to find it taking care of itself somewhere on the Pacific coast. *C. Sinense* is the species which has given rise to the multitude of single and double garden forms. This plant was introduced to France and England during the last half of the eighteenth century, but did not attract great attention until 1826 when a French amateur produced several varieties from a sowing of seed. About 50 varieties were described in 1835. The hardy pompon varieties were introduced from China, and these were crossed with the older kinds which resulted in a variety of white, yellow, buff, brown, crimson, "lotus-flowered," "red" and maroon shades of color. To-day the colors are largely described from greenhouse flowers, but in spite of ingenuity, and the accession of other types, the range of color is but little widened. Mr. Fortune was responsible for the introduction of the comparatively tender Japanese breed, but many of these do finely outdoors at southern and Pacific coast points. It was thought for some time that these raggy, twisted toothed, and often cranky growing flowers would effect but little improvement. Now the most popu-



CHRYSANthemum FRUTESCENS.

lar greenhouse varieties are due to them. Chrysanthemums at the North should be planted under walls and afforded water when necessary during growth. They should be disbudded, the plants divided, and the soil renewed annually. They should be staked. They should be protected by light cloths for two or three weeks previous to flowering, and their roots should have a heap of saw-dust or pine needles

ARTEMESIA TRIDENTATA.—From *Vick's Magazine*.

placed over them during the severe winter. They would then be far finer. Selections of hardy kinds should commence with the "pompones" and be recruited from neighboring collections, for plants which are called hardy here are tender 50 miles northward. There are several fine half-shrubby Canary Island and South African species commonly called "marguerites" by the French. *C. coronarium* and *C. Carinatum* in variety are typical of the Mediterranean annuals. *C. segetum* is the British yellow Ox-eye."

Artemesia is a large genus of 150 or more species, called "wormwood," southernwood, "sagebrush" and many other things. Several are shrubs. *A. alrotanum* being one of the most familiar in northern gardens with *A. stellerianum* a close second. *A. arborescens* and *A. procera* are in European gardens. *A. cana*, *rigida*, *spinescens*, and *tridentata* in varieties are the familiar sage (scented) bushes of the northern Rocky mountain regions, and *A. filifolia*, *A. Californica*, *A. Bigelovi*, *A. Bolanderi*, *A. Rothrockii* and some others are those of the arid regions of the southwest.

Trenton, N. J.

James MacPherson.

The city engineer of the old cathedral town of Canterbury, England, is advocating and has been adopting a method of making macadam roadways, in which each stone is coated with tar before it goes into the roadway.

The stones are prepared for the tar by heating them, either in the open, or in an oven or kiln. When done in the open, they are spread out on a

flat bed, some twelve inches thick, and covered with three or four inches of coke and breeze, with a little wood to aid the fire, and in this way a stack of stone about five feet high is formed. It is frequently made conical and closed at the top. Then it is fired and allowed to burn for seven or more days. As this method, however, causes the disintegration of many stones, an oven or kiln, with its more equable temperature, is preferable.

Tar of good quality should be used and heated long enough to assure great tenacity. It may be boiled in fifty-gallon kettles for three or four hours, and after half a bucketfull of pitch is added, boiled a little longer.

The stones, to receive their coating of tar, should not be warmer than the palm of the hand can bear comfortably. If they are used when too hot, the value of the tar for building is destroyed, and, if they are not hot enough, the tar will be so thick that it will soften in hot weather.

When the stone is of the proper temperature it is screened, so as to secure three distinct sizes—one to two inches for the bottom layer, one-half to one inch for the middle layer, and one-quarter to one-half inch for the top layer. The bottom layer is from three to four inches thick, and is thoroughly rolled with a ten-ton roller, then the second layer of half the thickness is laid and thoroughly rolled, and a very thin top layer is laid and also thoroughly rolled. A final top dressing of quarter-inch and smaller granite screenings is put on, and traffic is admitted to work this fine material down into the tarred roadbed.

A road so formed is said to be capable of carrying the heaviest country traffic and to be good for seven years, with an outlay of four cents a square yard for repairs, when more extensive repairs may be required. The cost for the depth of four and one-half inches is for material thirty-six cents per square yard, excavating eighteen cents; broken brick ballast, twenty cents; labor, eighteen cents; rolling, six cents; contingencies, ten cents; a total of one dollar and eight cents a square yard.

The great vine at Hampton Court, England is at last beginning to feel the effect of age. It is not, perhaps, surprising since it has been flourishing since 1769 and has gone on bearing 2,000 bunches or so of Black Hamburgs for the last hundred years. This year, in its weakened condition, it is only to be permitted to bring 1,200 bunches to maturity.

ROYAL BOTANIC GARDENS, KEW, SURREY,
ENGLAND, IV.
ADMINISTRATION.

Contributions to botanical science from Kew in the form of monographs, floras, indices, physiological and economic exposition, etc., are so numerous that to dilate on them here would be but supererogation. It is, nevertheless, necessary in mentioning administration, to point out the role Kew plays in foreign botanic gardens. In developing the vast empire of Great Britain it is obvious that two of its greatest resources lie in its mineral and vegetable wealth. To the latter, and that which only concerns us here, Kew has been very potent in influencing its drift. While Kew does not control the distant botanic establishments absolutely, she has vested in her by a decree of Parliament more than half a century ago, the chief authority in everything pertaining to the botanical science of the Empire. The position to which Kew has worked itself is such as to give the government unlimited confidence in her and she is therefore regularly consulted concerning them and frequently called upon to select suitable heads for the various departments abroad to develop the industries in which vegetable life plays a part. Her assistance in preparing the various floras of the possessions is instanced as one direction of her labor. Her efficiency enables horticulture to be served in certain directions as elsewhere impossible. Altogether she thus holds sway over some fifty botanical establishments of three different kinds: "botanic departments," "botanic gardens" and "botanic stations," the first comprising a number of establishments under a governing director who is located at the seat of government. Subordinates in the various localities under his jurisdiction are known as "superintendents" or "curators."

An annual maintenance fund for each of these departments may aggregate from £3,000 to £8,000 and cultivate from 100 to 500 acres. Such are to be found in Jamaica, Calcutta, Ceylon, Australian Colonies, etc.

"Botanic Gardens" with a "superintendent" as its head, are usually isolated and rarely cultivate over 50 acres each with an annual maintenance cost of from £1,000 to £3,000. Trinidad, Hong Kong, many of the native states of India, etc., have such.

Colonies of more moderate wealth such as British Honduras, St. Lucia, Dominica, Barbadoes, Antigua, etc., are provided with "botanic stations"—an institution of recent inauguration started at Grenada in 1886. They are practically trial gardens or experiment stations for the dissemination of plants and knowledge concerning them to the colonists of the respective domains. They vary in size from 3 to 30 acres, are directed by "Curators" and maintained at a cost of from £300 to £800 annually.

Instances occur as at Tasmania when the botanic establishment is under the direction of local scientific societies which in common with the local government defray the maintenance cost. The work of these institutions is usually recorded in the form of "bulletins"—principally of an economic trend, issued at their seats.

To-day, aside from directing the conservation of the

garden proper with its multitude of living plants, are the economic museums, library, physiological laboratory and herbarium over which the director is chief.

To assume the responsibilities incumbent to such a position and steadily forward with ever increasing material and vast strides the present chief has ably demonstrated his abilities to the commercial, horticultural and botanical universe and needs no further exposition here.

When appointed assistant director to Sir Joseph D. Hooker in 1877, the present director W. T. Thiselton-Dyer, C. M. G., L.L. D., P. H. D., etc., vacated the seat of Professor of botany at a prominent College. On the retirement of Sir Joseph in 1887, Dr. Dyer succeeded him.

While maintaining the honor, dignity, the prestige and usefulness of an institution holding an exalted position in the general world of ideas, the present director has witnessed during his official term the completion of the *Flora Braziliensis*, *Flora Indica* and *Index Kewensis* all prepared at Kew; the continuance of the Botanical Magazine; the inception of periodical "Kew Bulletins" in lieu of the annual reports characteristic of former regime, and a host of similar and equally important publications.

Dr. Daniel Morris the assistant director, was for several years subsequent to 1879 director of "Public Gardens and Plantations" in Jamaica, where he served with distinction in developing the economic resources of the West Indies. In 1890 he made a special tour of the West Indies, to study the means of promoting their efficiency to persons interested in plants and their products.

His report on them was later presented to Parliament. In 1877 as assistant to Dr. Thwaites of the Botanic Gardens at Ceylon, he made a special study of the coffee disease (*Hemileia vastatrix*) that later exterminated that industry at Ceylon. To many New Yorkers Dr. Morris is personally known through his lecture before the Torrey Botanical Club in the winter of '95-'96 on the "Rise and Progress of the Royal Gardens, Kew." During the winter of '97 Dr. Morris accompanied the Royal Commission delegated to the West Indies to enquire into the failure of the commercial productiveness of sugar, as expert in botanical and agricultural matters, and his report was published as an appendix to that of the commission and has since appeared separately from the Royal Gardens.

In 1866 John Gilbert Baker was appointed assistant keeper of the Herbarium and was in 1890 Prof. Oliver's successor. Mr. Baker is especially devoted to systematic botany and the wide range, depth and astuteness as also the accuracy of his grasp as shown in his innumerable publications, place him in the front rank of all systematic botanists. A giant intellect concentrated on the study of a universal flora shows itself by the nicety with which he ferrets and creates new species and genera that customarily enjoy an unusual stability. An author of rare ability and enormous energy, his productions are marvels in point of number and scientific worth.

William Botting Hemsley, F. R. S., entered Kew as a young gardener and is at present first assistant in Phanerogams. He was perhaps first known to the gen-

eral public through his studies of the flora of Juan Fernandez, and is now well acquainted by the penetrating insight shown throughout his numerous botanical contributions in the many botanical and horticultural journals of the day.

Geo. Massee, F. L. S., is principal assistant in Cryptogams. Among his more recent writings, gardeners particularly recall the investigations of the Bermuda Lily disease, published in the Kew Bulletin in the summer of '97.

Among the other herbarium assistants are N. E. Brown and B. Daydon Jackson, identified in the collaboration of "Index Kewensis;" President Clarke of the Linnean Society; Dr. Staff, assistant for India and R. A. Rolfe the orchid specialist.

The honorary keeper of the Jodrell laboratory of Physiology is Dr. D. H. Scott. John Reader Jackson (A. L. S.) holds the office of curator of the Museum. A wide stride since 1847 when Sir William Hooker was granted one room in which to exhibit economic specimens to the present day where three large museum buildings are well stocked with products and forms of vegetation. First to start and ever since foremost in the world it has reached a stage preeminent in its own field. The duties incumbent on the man for the past 30 years curator of this department is the best commendation of his fitness and efficiency.

Geo. Nicholson, curator of the gardens, attends the living collections, maintaining those possessed and collecting others from every part of the universe. Mr. Nicholson is best known to American readers by his excellent "Dictionary of Gardening," where he brings down to date the types of work shown by Philip Milho, Loudon, Lindley, Johnson, etc. A man of wonderful intellectual resource and a thorough horticulturist. In addition to the general honor and dignity he brings to his charge, the most interesting phase is his correspondence. Scarcely a person of note in the botanical and horticultural universe who has not at some time been approached by him to exchange plants or seeds with Kew, thus easily explaining the completeness of the Royal Gardens collections.

In addition the regular staff includes a number of assistants in the Herbarium; an assistant curator of the museums; assistant curator of the gardens; four foremen in the gardens; fifty gardeners; a number of mechanics and about seventy day laborers.

At the Herbarium each day from 10 A. M. to 4 P. M., questions of botany are studied, while at the economical museums problems facing merchants, pharmacists and various phases of industry are investigated.

In the gardens proper the hours of labor extend from 6 A. M. to 6 P. M., with one and three quarter hours for meals.

The assistant curator supervises the cultivation and general care of most of the indoor plants; the foreman of the decorative department oversees conservatory and decorative outdoor section. Over the arboretum's care, culture and propagation, a separate foreman is placed and likewise over Herbaceous and Alpine plants; as also one for the temperate house.

Mr. Baker attends to the labelling of the garden col-

lections and the respective foremen maintain the labels in proper place.

Mechanical construction and repairs of all sorts are under a clerk of the "Board of Works," and all garden operations are supervised by the curators.

Each gardener is responsible to a sub foreman for health and thirstiness of his plants and general polish of his charge.

On account of the old age of Kew, the general preliminary operations necessary to transform the physical geography by grading, protecting the grounds from without by masonry and planting, and planting for decoration and allowing time to develop has long since been completed and enables the entire income and time to be expended on maintenance and strictly botanical work. The annual expenditure, necessary for maintenance is 12,000 pounds sterling.

One of the best tokens of public appreciation and confidence is the spirit of donation. As a recipient of such gifts Kew is noted. Trees and shrubs by the Duke of Argyle; economic products by the Indian Government; rock plants by Geo. Curling Joad, ferns by Dr. Foster and Carbonell, and the continuous flow to herbarium and library is of a size and magnanimity simply wondrous—Lindley, Bentham, Hooker, Banks, De-Candolle, etc., while to enumerate those living would be to include every botanist of note and the better portion of all those interested in plants throughout both hemispheres.

The gardens are open to the public each day from 10 A. M. to sunset. Constables patrol the entire grounds as a matter of custom rather than necessity. Each day previous to opening to the public general routine and administrative necessities are gone through and artists, botanists, horticulturists, etc., with special claims to secluded facilities in study are admitted. Sundays the garden remains open from 1 P. M. till sunset, and gardeners, employees and others on patrol are provided with badges—a custom started by Sir Joseph Hooker in 1883. In each greenhouse from one to four men are stationed, principally at the doors, to direct visitors to continue in a circuit around the house thus avoiding the passing each other in opposite directions and the consequent breakage of plants.

Emil Mische.

(To be continued)

There grows in Arabia a plant which derives its name, the laughing plant, from the peculiar intoxication produced in those who partake of its seed. It is of moderate size, with bright yellow flowers and soft velvety seed pods, each of which contains two or three seeds resembling small black beans. The natives of the district where the plant grows dry these seeds and reduce them to powder. A small dose of this powder affects similar to those arising from the inhalation of laughing gas. It causes the soberest person to dance, shout and laugh with the boisterous excitement of a madman and to rush about cutting the most ridiculous capers for nearly an hour. At the expiration of this time exhaustion sets in and the excited person falls asleep, to wake after several hours with no recollection of his antics. The botanical classification of the growth has, it is said, not yet been identified.

* PARK NOTES. *

Mr. Benjamin Vaughan, Boston, hearing of the movement of the Hallowell, Me., Improvement Society to raise funds for the purchase of a fountain for City Hall Square, offered the society the sum of \$500 for the purchase of two drinking fountains to be placed in different parts of the city, the city to have charge and supply water for the fountains. The gift has been accepted and the city has signified its willingness to control the fountains and they will be placed in position at an early day. The Vaughan family were among the first settlers of Hallowell and have always manifested a great interest in the city and its institutions.

* * *

Some of the writings of Dr. Wendell Holmes on the subject of trees are refreshing and inspiring. In one place he says: "We find our most soothing companionship in the trees among which we have lived, some of which we may ourselves have planted. We lean against them, and they never betray our trust; they shield us from the sun and from the rain; their spring welcome is a new birth which never loses its freshness; they lay their beautiful robes at our feet in autumn; in winter they stand and wait—emblems of patience and of truth—for they hide nothing, not even the little leaf-buds, which hint to us of hope, the last element in their triple symbolism."

* * *

The munificence of Mr. Charles H. Hackley in Muskegon, Mich., is well worthy of repeated acknowledgement, for it shows how much good may be accomplished, from well considered gifts, and may serve as an incentive to other rich men to help the cities which have perhaps most helped them. Mr. Hackley's donations to Muskegon thus far have been: Hackley's Public Library, \$125,000; Hackley Square \$45,000; Soldiers' and Sailors' Monument, \$27,000; toward the Hackley and High School buildings, as an endowment for the library, \$75,000; Hackley Manual Training School building and equipment, when completed, \$70,000; endowment, \$100,000; statues of Lincoln, Grant, Sherman and Farragut, \$25,700; total \$467,700.

* * *

The American Forestry Association held a meeting in Omaha, Neb., early this month, in accordance with a vote taken at the Nashville, Tenn., meeting of a year ago. The topics arranged for discussion were mainly appropriate to Western conditions. Among the papers and discussions were the following: "Where does our Timber come from;" "The Wind Break—Its Value and Form;" "The Catalpa in Plantations;" "The Extension of Native Forest Growth in the Plains;" "How does Forest Growth Affect Climate;" "The Forest Botany of Nebraska Economically Considered;" "Arbor Day and its Economic Significance." Many of the most prominent men in the country interested in this important feature of the nation's economy participated.

* * *

Since the old public common of York, Pa., has been converted into what is now known as "Penn Park" various organizations and individuals have been contributing in various ways to its embellishment. Among the donations are band pavilion; an iron flagstaff one hundred feet in height with a flag, and numbers of settees and benches. In addition to the many trees planted by the citizens who laid it out on last Arbor Day each individual school in the city, either public or private, planted a tree. In this same park stands the monument recently erected by the County Commissioners in memory of the soldiers and sailors of the Civil War. The latest gift of the citizens which was dedicated on Labor Day is a fountain standing 24 feet in height.

The first or lower basin is thirty feet in diameter and four feet deep, the second basin is ten feet in diameter and the third or upper basin is seven feet in diameter. It is surmounted by a figure of "Rebecca," eight feet in height.

* * *

The city of Chattanooga itself is to be considered in relation to the part it bore in the war of 1861-65 in connection with the National Military Park. The Chickamauga Park commission has made plans to erect monuments to famous union generals who participated in the battles of Chickamauga and Mission Ridge to be erected on the triangles and squares in and about the city. These are to be built at the expense of the government. The plan is afterwards to turn them over to the city park commission to care for them and beautify the surrounding grounds. In the matter of establishing a park in South Chattanooga, it is understood that Mrs. H. L. Whiteside will give to the city an entire square to convert into a park and that a monument will be erected there in honor of her son, the late Judge Hugh Whiteside. The setting out of hundreds of new trees, trimming those now set out, converting the city's land east of the national cemetery into a park and fixing up the Citizens' cemetery is, in brief, a summary of the park commissioners' work now laid out.

* * *

Among the railroads which have entered into the idea of parking some of the blank spots about their depots, thus adding to the attractiveness of the locality and their own popularity, is the Michigan Central. This company maintains greenhouses, propagating establishment and a chief gardener and assistants, whose duties are to improve and embellish the station grounds along the route of the road, under the jurisdiction of the chief engineer. It is to be regretted that in most cases the chief efforts are directed to formal designs and the grotesque in gardening, even though it offer paramount attractions to many. At Ypsilanti, Mich., this year, John Laidlaw, the chief gardener has produced a floral representation of the battleship "Maine," 53 feet long, on a scale of one-sixth natural size. Over 117,000 plants were used in its construction, comprising Nepete glacama, Alternanthera spatulata, Echeveria segunda glauca, echeveria metalica, alternanthera parychoidea major, alternanthea versicolor, and sedum variegatum, etc. Besides a number of formal beds at this station, there is a representation of a large disappearing gun, displaying much ingenuity in design and carrying out.

* * *

In a discussion at Omaha during the convention of the Society of American Florists, Mr. C. B. Whitwall of Milwaukee, Wis., made the following remarks on the relations of the florists with park officials and the duties of florists themselves towards the parks: "I do not believe there is a city of any size in which the practical florist could supply what the park systems require at any price. They certainly could not do it unless they had taken the contract a year in advance and where that has been undertaken, as far as I know, the contracts were not satisfactorily filled. I think there is no other way for park administrations to have what they really want—when they know what they want—other than to produce it themselves, as long as they are not competing with the florists. * * * Moreover, I think that we should interest ourselves and the public as far as possible, in the management and care of public parks. I believe it would be advisable for all our cities that have florists' clubs to branch out and form horticultural societies for the purpose of instructing the people to take an interest in the parks and their evolution, in order to back up good superintendents and good managers when they get them—and hold on to them. I think, in that way, political influence will be killed better than in any other."

CEMETERY NOTES

The board of aldermen of New York have adopted resolutions requesting the United States government to lay out a national cemetery, to which the bodies of the soldiers who have fallen in the Spanish war shall be transferred for burial, and to erect a monument therein.

* * *

A recent improvement at Green Lawn cemetery, Columbus, O., is a steel bridge spanning the ravine and giving access to the western portion of the cemetery, in which a new section is to be prepared. The bridge has just been completed at a cost of \$4,500. Considerable improvement is under contemplation by the trustees.

* * *

Kalamazoo florists have entered a complaint before the attorney general at Lansing, Mich., that the incorporated cemetery association of Kalamazoo is competing with them, contrary to the statute under which it was organized. The charge is that the association seeks not only to furnish graves but flowers to cover them.

* * *

A Pennsylvania inventor makes the startling proposition to introduce porcelain as a material for tombstones. This is too radical for calm consideration at present, but as to its durability we have only to think of the uses of porcelain among the Chinese and Japanese, and of their relics of ancient art. Something more easily mentally assimilated just now is the idea of the Pittsburgh firm to manufacture glass coffins, which may be hermetically sealed. Here is another practically indestructible material, which in the shape of a casket would invite the consideration of many people who object to contact with mother earth.

* * *

By the will of Joseph Banigan, of Providence, R. I., recently deceased, the executors are directed to finish and complete St. Bernard's Mortuary Chapel at St. Francis Cemetery, and the residuary devisees are to set apart \$5,000 annually until the entire sum so set apart shall amount to \$100,000 when this money is to constitute in their hands, or in the hands of such trustees as they shall select, a trust fund, the income of which is to be applied to the repair and maintenance or reconstruction of the chapel. In the selection of trustees for this fund the testator recommends the Rhode Island Hospital Trust Company.

* * *

A recent application to the Lodi borough Council for a permit to establish another cemetery on the road from Lodi to Passaic, N. J., reminds one that if carried out, this will make the fifth in a row of cemeteries on this thoroughfare. The Catholics, the Greek Rite Catholics the Protestants and the Hebrews are represented in these cemeteries. An exchange says: A facetiously inclined clergyman after a funeral in one of them the other day, remarked that when Gabriel blows his horn, the response along the Lodi road will be uttered in many languages. All the chief races of the world, except Mongolian, are represented in one or the other cemeteries and the mixture of religions is complete.

* * *

A controversy over burial has occurred between the civil authorities of Brooklyn and the military officials at Willets Point recently. A private soldier was accidentally killed on the United States reservation at Willets Point, and the coroner of the borough attempted to hold an inquest, which was stopped by the military authorities. The assistant United States surgeon made out a death certificate and applied for a burial per-

mit, but the borough authorities refused to issue the permit. The commanding officer at Willets Point thereupon decided to bury the body without a permit, and it was interred in the national burying plot at Cypress Hills Cemetery. An opinion has been asked on the question.

* * *

A conflict occurred in Washington cemetery, Brooklyn, last month, between a monument builder and the cemetery officials in the person of the superintendent, resulting in the eviction of the monument man. Armed with a permit from a society owning a plot of ground, and for which he was to erect a monument, he commenced digging for the foundation, a work which the cemetery by its rules controls, and refusing to comply with the superintendent's request to cease work, he was summarily expelled. The monument man then applied to a magistrate for a warrant of arrest for assault, which was refused on the grounds that the Washington Cemetery Company was regularly incorporated according to the laws of the State of New York and had a right to make its own rules.

* * *

McCook, Neb., has been stirred to its foundations by the action of a committee of five women, appointed by the city authorities to look after the principal cemetery of the town. This committee, it appears, without any preliminaries went to work to remodel the cemetery on the lawn plan, and by the aid of the sexton, according to the local press, removed a number of fences, leveled graves, rearranged head and foot stones, cleared out floral and such decorations and did some cleaning up generally. In explanation of their work the committee refer to the cemeteries of Denver and Lincoln. From the expressions current McCook is not yet sufficiently advanced in the enlightened ideas governing modern cemetery methods, and are resenting this radical method of instruction.

* * *

The body of Capt. T. W. Morrison, 16th U. S. Infantry, who was killed at Santiago, Cuba, July 1st, was buried Sept. 6th in Uniondale cemetery, Allegheny, Pa. A detail from his regiment who fought with him in Cuba accompanied the remains, and the funeral cortege was met at the cemetery by soldiers from the Allegheny Arsenal. The grave is near by that of Lieut. Friend Jenkins who perished in the "Maine" disaster, an account of whose burial was given in these columns. The floral display was beautiful, many designs being suggestive of his calling and of his family ties. After the service that most impressive of military funeral ceremonies, "Taps" followed the three volleys and the sorrowing family and friends retired. The desire for souvenirs by the spectators rendered a strict guard necessary, and kept the cemetery employees on the alert.

* * *

In a recent arrest for trespass made by the Riverview Cemetery Company, Wilmington, Del., to test the validity of their rule prohibiting individuals or firms from making contracts with lot-holders for the care of their lots, in competition with the cemetery company, a fine and costs were assessed against the defendant by the Justice. A strong fight was made, but in his opinion when imposing the fine the Justice said: "Cemetery companies are unique institutions and should have peculiar protection, and in order to properly care for the lots, the Board of Trustees should be given exclusive control of the grounds under their care." The rule of the cemetery covering the case was adopted in March last and reads: "No individual or firm shall hereafter act as a general contractor with lot-holders in caring for the lots in the cemetery, trimming grass, etc., in competition with the cemetery company, but this provision shall not prevent any lot-holder or any member of his family or a regular employee of such lot-holder from doing such work."

SOME SPECIMEN TREES AND SHRUBS.

Subscribers can make this column particularly interesting by forwarding photographs and descriptions of specimen trees and shrubs.

Acer Rubrum Var?

Mr. Theodore Wirth, superintendent of City Parks, Hartford, Conn., sends photographs of two Maple trees, one of which together with sketch of foliage is here given. These trees which are growing in Bushnell Park of that city have attracted the attention of every visiting lover of trees. Mr. Wirth says of them:

From the distance they look the image of a poplar. The trees are about 35 to 40 years old, but nobody seems to know where they came from. One of them shows distinct marks of grafting on rubrum stock. Inquiries as to the proper name and origin are numerous, and that the trees have attracted attention for many years, is evident through a letter in possession of Hon. S. W.

ACER RUBRUM, VAR?—BUSHNELL PARK,
HARTFORD, CONN.

Adams, late secretary of the Board of Park Commissioners, dated August 1880, and written by Prof. Daniel C. Eaton of Yale University in which the writer states that Prof. Asa Gray is positive that the trees in question are simply a form of Acer Rubrum.

Whenever the trees originated and came from the assumption is natural that the same variety must exist elsewhere and the object of this writing is to find out through the columns of PARK AND CEMETERY.

A leading nurseryman of New England, observing the trees during a visit asked for some scions, which were cheerfully furnished and this Acer Rubrum Var. may appear in a few years as a duly recognized novelty. All agree that the tree is worthy of special attention and culture; it seems to be thrifty and free from disease, and its characteristic pyramidal form should give it a prominent place amongst its kind.

* * *

White Weeping Mulberry.

The illustration herewith shows a white weeping Mulberry, growing at the entrance of Woodland ceme-

tery, Dayton, O., and for particulars of which we are indebted to Mr. J. C. Cline, the superintendent.

It was planted ten years ago this fall, and was a



LEAVES OF ACER RUBRUM VAR.

very small plant at that time. It is now about twelve feet high and its drooping branches cover an area of about fifteen feet in diameter. No particular attention is given to it, other than an annual early spring pruning, which consists of cutting back the long branches



WHITE WEEPING MULBERRY. WOODLAND CEMETERY,
DAYTON, OHIO.

about three feet from the ground. It forms an attractive and unique specimen, certain to draw the attention of all visitors to the cemetery who love trees and shrubs.



CORRESPONDENCE.

Private Graveyards of New England.

The private burial grounds of New England are amongst the relics of colonial times, and for all practical purposes are relegated to the past; we find them in various positions, upon the farm, and upon the homestead and in various conditions also. The sympathies of people connected with cemetery work, naturally extend themselves beyond the limits of their own domain. I was struck by the painful contrast between two of these private grounds I noticed upon a recent excursion to Newport, R. I. The remains of the first president of Rhode Island, along with, I presume, some members of his family, are interred in a small plot of ground, nicely enclosed and kept in order; a large and elegant monument has been erected to his memory, as the inscription thereon informs us, by a lineal descendant. Under present circumstances, to remove the remains of this illustrious man, and of those buried with him, would seem to be an act of sacrilege, so by all means let them rest in peace.

A few miles from Newport, upon the main road, in full view of the thousands of people the electric cars carry between Newport and the neighboring city, is another private burial ground, with several old fashioned gravestones; to say that it is unenclosed and uncared for, would not describe its condition; for it is surrounded by wire netting, and a small flock of hens are ever diligent in their efforts to level off the mound, in accordance with modern ideas of cemetery care, and to scratch up the bones, an important element in egg producing, according to modern ideas of poultry keeping.

It seems strange that in this enlightened age, there are people who will tolerate this state of things beneath their very windows. I would suggest that the legislators, who are trying to prevent the removal or defacement of natural landmarks, might profitably devote some effort to prevent the desecration of these private graveyards, either by the removal of the remains to some properly organized cemetery, or by making such indignities as we have spoken of a punishable offense. *T. White.*

* * *

The interest which attaches to the following letter from Mr. H. W. S. Cleveland, suggests its publication. Mr. Cleveland is one of the pioneers of landscape art in this country, whose active career extends over more than half a century of time, and whose interest, although he is of very advanced age, is keenly alive to the higher development of the profession in which he was so long an arduous worker:

HINSDALE, ILL., Aug. 11th, 1898.

Editors Park and Cemetery:

GENTLEMEN:—You know that my life has been devoted to the work you are advocating and it is a source of joy and national pride with me to trace the advance we have made within my recollection in an art which tends so directly to elevate the character of our people.

When I began my work as a landscape gardener more than sixty years ago, the only periodical devoted to the art was "*The Horticulturist*" edited by A. G. Downing who was my personal friend and instructor. It was years after that when I first heard of a thriving village on Lake Michigan called Chicago. The farthest western point reached by a railway at that time was Harrisburg, Penn. My only regret in receiving your present is that I have but one eye left, and that is so weak that I read with difficulty and have to rest frequently. I am in my 84th year, and although my health was never better and my physician says I am good for many years to come,—my senses have failed me terribly. I am so deaf that it is useless for anyone to try to read to me, but I suffer no pain, and above all my mental faculties are left to me.

You will perceive that I have acquired the proverbial garrulity of old age, for which I beg you will pardon me, and believe me, very truly yours, *H. W. S. Cleveland.*
* * *

The Disadvantage of Selecting Trees for Cemetery Planting.

The poor judgment used in the selection of trees for planting in cemeteries, has proven to be a source of great evil in most of our cemeteries, as well as many of our city streets. Trees that are indigenous to this country, and of rapid growth, seem to predominate, such as soft maples, poplars, &c., and the result of this selection becomes an eyesore in a few years, as we come to realize that at the time when these trees should be at their best, we begin to question the selection of varieties.

Recently, while in Uniondale Cemetery, Allegheny, Pa., I saw in the old part of the cemetery a very poor selection of trees. Indeed, in one section there was scarcely anything else but Southern cypress (*Taxodium distichum*), and in all the other sections nothing but cotton poplar, swamp maple and one or two elms; and these had been planted so close to the edge of the drive that the limbs had to be cut off over the driveways. Half of these are decayed and shed their foliage all through the summer. Cutting off the bottom limbs has a tendency to make the tree top heavy, and frequently limbs of these unsightly monsters are torn from the trunks during storms, each storm adding to its record of destruction, frequently uprooting the whole tree.

In another part of this cemetery we find conditions that are keeping step with the march of modern ideas. Mr. William Harris, the superintendent, has inaugurated a system of planting that will fully repay his care. In the newer portions can be seen to advantage the wisdom of selecting trees that are adapted for each location.

In the later sections the planting of trees and shrubs has been diligently prosecuted, and some of the avenues will, in a few years, equal any that are now existing in our cemeteries. In the planting of these grounds, Mr. Harris has adopted a system that may well be copied by other tree planters. He plants his trees, where conveniently situated, 5 feet from the curbing; this method obviates the cutting off of healthy limbs, a practice which prevails extensively. The superintendent contemplates planting a large amount of trees the coming Fall and Spring, and is working on a plan for the entrance to the new division.

The trees principally used by Mr. Harris: chestnut, lindens, pin oaks, liquidamber, ginko, elms, maples and white birch.

David D. Howells, Allegheny, Pa.

* * *

A New Rule to Govern the Sale of Lots.

Mr. Benj. Radcliffe, Marcus, Ia., sends the following resolution, adopted by the Marcus & Amherst Cemetery Association, of Marcus, Ia., with these remarks: The object of the resolution is apparent from its reading, but I am not sure that it is practicable, and I would like to get the opinion of others through PARK AND CEMETERY, as to whether such a rule would be feasible or of practical use:

Resolved, by the Marcus & Amherst Cemetery Association, of Marcus, Ia.: That in all sales of lots hereafter made, there shall be included as a consideration of such sale a condition that the purchaser shall pay annually to the Association such sum, not to exceed a certain sum stated, as may be fixed by the Board of Trustees, to be expended under the direction of the Board in the care of the lot sold and a proportionate part of the adjoining walks, and providing that on failure of such payments, the sum stated may be advanced and expended by the order of the Board in care of such lot and adjoining walk, and the amount so expended shall be a lien upon such lot in favor of the Association; and upon the failure or default of three or more of such annual payments, the said lot, or so much and such part thereof as the Board may deem equitable, shall be forfeited to, and upon declaration of the Board of Trustees, shall revert to the Association. Provided, that this regulation shall not apply to lots sold on a guaranty of perpetual care, wherein the payment for such care is otherwise provided.

Selected Notes and Extracts.

Caryopteris Mastacanthus

This is unmistakably one of the finest shrubs introduced in recent years. It was, and is, sometimes called the blue spiraea; but it has no relation to that genus as it is a near relative of the chaste tree (*Vitex*) which is among those plants comprising the verbena family. The caryopteris has been tried for several years, and while in northern sections, owing to its being killed to the ground in winter, it will there be treated more as an herbaceous plant than as a shrub, in the latitude of Philadelphia and favorable positions further north it has come out all right through recent winters. In Washington, bushes of it are now six feet high. It is one of the last shrubs to come into flower, opening out about the first half of September and lasting several weeks. The flowers are produced in fair-sized heads in the axils of the leaves on the shoots made during Summer; the flowers are bluish purple. Propagation can be carried on at any time during the Summer or Fall, preferably during the latter season, for which preparations should be made some time in advance by cutting back some of the stronger shoots to induce them to send out side shoots. The blind wood can be used during the flowering period. As soon as the cuttings are ready for removal from the sand they can either be potted or boxed and stored in frames for the Winter.—*G. W. Oliver*, in *Florist's Exchange*.

* * *

Shrubby Beneath Trees.

Frequent inquiries are made for a list of flowering shrubs that will thrive beneath old trees. The chief difficulty is in the matter of feeding material in the soil and not so much a question of shade, which is not expected to be really dense. Near the surface of the ground beneath old trees, there is a great net-work of roots, which must extract a very large amount of moisture and food. These roots, being more numerous and stronger, do not permit a newly planted shrub to get much of the necessities of life, and the new comer is slowly starved to death.

There are a number of plants that delight in shade, and if the soil be kept in condition, there should be no difficulty in growing them in such locations. The main attention should be in heavily mulching the ground above the roots with well-rotted manure, which will furnish both food and moisture. The following selection would prove very desirable and well adapted for such locations: *Ceanothus*

Americanus, azaleas, rhododendrons, *Pyrus Japonica*, *Clethra alnifolia*, *Cornus Mas*, *Itea Virginica*, *Ligustrum vulgare*, *Pavia parviflora*, *Berberis Thunbergii*, *Spiraea Bumalda*. *Laurus Benzoin*, *Hamamelis Virginica*, mahonias, kalmias, hypericums, *Diervilla trifida*. Many additions could be well made to this list.—*Meehan's Monthly for September*.

* * *

A Good Dry Weather Plant.

This summer has been an exceptionally hot and dry one so far, and its effects on most kinds of low-growing plants which have not been watered have been disastrous. A plant which has withstood the drought, with little attention, in the way of artificial watering, is the Madagascar periwinkle, *Vinca rosea*. It seems to flourish in almost any kind of soil, and if planted moderately close together, it forms a sheet of foliage and flowers, through which the sun has little effect on the surface of the soil. It is raised from seed sown beginning of March; the plants begin to bloom when quite small, keeping up a gorgeous showing all summer. There are three kinds—rose, white, and white with a pink center. The plants are abundant seeders.

* * *

At the meeting of the American Pharmaceutical Association, recently held at Baltimore, Md., there were exhibited numbers of growing medicinal plants gathered from the vicinity of that city. The U. S. Agricultural Department in its bulletin gives the number of the most important medicinal plants as 223. A florist of Catonsville has been putting in his spare time since Spring making a collection of such plants, and it is stated that about 100, more or less, of this class of useful plant life, are found in the neighborhood of Baltimore.

* * *

Pruning Shrubs.

About the middle of June I make a point of going through my shrubbery and putting the bushes into shape for next year's flowering. This will seem an odd time of the year to many to prune bushes, but it is the only proper time for it in the case of very nearly every shrub. It is much better understood than it used to be that to prune shrubs in the winter season means the loss of the spring crop of flowers. I have in mind many a handsome country residence where for years hardly a flower was produced on the various bushes because of improper pruning. Mid-June is the time in this State, but the exact time in any place is just after the flowering is over. Then the

sooner it is done the better it is. The object of the pruning is to cut out the shoots that have just flowered, leaving those that are just forming. Taking a Weigela as an illustration, when its flowering is over there will nearly always be noticed a number of young shoots springing from near the base of the plant. When the most of those that have just flowered are cut out extra vigor is given to the new ones, and they and other new ones which will form will become strong shoots, which will bloom splendidly the next season. The Japanese Snowball behaves in the same way, but its new shoots do not always spring from near the base, but come from any part of the old shoots. *Deutzias* and *spiræas* require the same treatment. I do not mean that all the old shoots should be cut away. Such a robbing of foliage as this would be likely to greatly weaken a shrub. What is meant is that a somewhat severe cutting back should be done, that the energies of the plant may be exerted towards building up the new shoots. The old shoots are of no use any more, excepting for what they may do in sustaining new ones which may spring from them. It is from lack of this knowledge that the shrubbery in many a country garden is made useless for the production of flowers year after year. The Winter or early Spring is made the season for pruning, and a shaping up of the shrubs at that season usually takes with it much of the past season's growth, which, as has been explained, is the flowering wood. If pruning cannot be done at the time recommended, better not do it at all, as there is always a certain amount of new shoots made, whether there has been pruning or not. There are some exceptions to the rule which should be mentioned. The now well-known hydrangea paniculata grandiflora, the clethia, caryopteris, vitex and some of the late flowering spiræas, notably *Bumalda* and Anthony Waterer, may be cut down closely in Spring with beneficial results instead of harmful ones.—*Joseph Meehan*, in *The Practical Farmer*.

* * *

The elm leaf beetle last year put in an appearance about July 10, but one spraying, however, with London purple was effective. The formula has been given before but is worth repeating: One pound London purple, six pounds lime and four quarts of flour in a hundred gallons of water. Apply with a force pump, using a fine spray nozzle. Small trees can be treated quite effectively with slug shot applied dry by a pair of bellows—after rain, or in the morning while the foliage is moist with dew.—*Alexander MacLellan*, in *American Gardening*.

PARK AND CEMETERY.

Devoted to Art Out-of-Doors,—Parks, Cemeteries, Town and Village Improvements.

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CONTENTS.

EDITORIAL—CEMETERY MEMORIALS — FORMAL GARDENING —	
THE BOULDER MONUMENT IN NEW JERSEY — MONUMENTS FOR	
BOTANISTS AND HORTICULTURISTS — MAUSOLEUMS.....	141
SOME DIFFICULTIES OF THE PARK SUPERINTENDENT	143
THE DUTIES OF PARK COMMISSIONERS.....	143
ROYAL BOTANIC GARDENS, KEW, ENGLAND, VI.....	145
*CHARLES EVANS CEMETERY, READING, PA.....	146
*A PLANTING CHART FOR GARDEN PLANTS, II.....	148
WHITE ROSES FOR THE CEMETERY.....	150
TWO NATIVE UMBELLWORTHS	151
*RECEIVING VAULTS FOR SMALL CEMETERIES.....	152
WHAT DO YOU DO WITH YOUR LEAVES.....	153
*GARDEN PLANTS—THEIR GEOGRAPHY, XXXIV.....	153
PARK NOTES.....	156
CEMETERY NOTES.....	157
CORRESPONDENCE	158
SELECTED NOTES AND EXTRACTS	159
PUBLISHER'S DEPARTMENT.....	160

*Illustrated.

MANY times in the past this journal has drawn attention to the broader fields of cemetery memorials, in which something more than the mere selfish idea involved in the family sarcophagus, shaft or kindred monument, asserts itself. The thought is emphasized and returns with stronger conviction each time the record of such a memorial is noted. It is gratifying to read of the increasing number of gifts being made to cemeteries here and there over the country; gifts that, while adding to the attractive features of the cemetery, serve in far more than an ordinary sense the effect of a memorial. In the landscape plan of laying out cemeteries, where lawns and shrubbery and trees combine with gracefully winding and well kept roads to create scenic effects of surpassing beauty on every hand, an excess of monuments must tend to mar the prospect, and it is desirable to limit the monumental display so far as is compatible with the desires of those immediately interested. This may in a large measure be obviated by recourse to other forms of memorials, and in this connection a fine tree is an interesting object. And if such a memorial is to be judged by the amount of money expended, a fine tree, transported and transplanted, may be made very costly, ac-

cording to its size and rarity. In other directions, excellent, appropriate and useful memorials may consist of entrances, fountains, shelter houses, chapels, and in fact nearly every accessory that serves to lead to a cemetery fulfilling its purposes under every aspect that its location, condition and destiny may suggest.

WHILE formal gardening will probably always have its admirers, the contrast between this style of floriculture and that which makes its flower beds to blend with the landscape and add a tone to the picture, must be more satisfying to the cultivated taste. Moreover, it offers so much greater opportunity for variety in its effects in relation to the landscape, and its season may be readily prolonged by the exercise of horticultural knowledge. One of the latest practical demonstrations of this fact is that witnessed in Washington Park, Chicago, which in former years was noted for its "curiosities" in flower beds. With the completion of the fine conservatory and the rearrangement of the adjacent grounds, the formal gardening has given place to flower beds laid out to harmonize with and emphasize the lawns and shrubberies, and the balanced effects are in striking contrast to the heterogeneous nondescripts which once occupied the grounds and obtruded their bizarre formalities. However, it must be admitted that formal gardening, with its eccentricities in design, finds great favor with those less endowed from an educational standpoint, and especially with children; so that this would seem to be a valid reason for its continued existence. Nevertheless, in our landscape parks it should not occupy a position that will detract from the harmonious relations of the surrounding scenery, and yet it should be so arranged as to be readily accessible and attractive to those to whom it may serve as an inspiration to higher things. From an educational standpoint in the practice grounds, formal gardening must also be credited with a more or less useful purpose, in that it affords opportunities of testing what may be done in the way of training and cutting flowering and foliage plants to carry out color and figure designs. This leads to the propagation and breeding of plants to obtain these results and is in that way a valuable field of study and practice.

THE decision of certain New Jersey cemetery officials to refuse admission to a boulder monument is a questionable proceeding, inasmuch as

boulder monuments offer a variety in monumental work oftentimes unique and under certain circumstances very characteristic. The only fear is that in the case of a local popularity such a class of monuments may be detrimental rather than appropriate. It is quite in line with present cemetery practice to take control of the question of monuments, and it is very probable that in the future the lines may be more tightly drawn, but it is also true that in making their laws cemetery officials must be guided by mature judgment, and must allow their lot owners all possible freedom in respect to monumental work that the present and future interests of the cemetery suggest as reasonable.

IT might, perhaps, be an invidious work to draw comparisons of the good that the various efforts of man have accomplished for the good of his fellow humanity, but it is certain that the botanist and horticulturist have ministered in a very positive way both to the pleasure and welfare of the civilized world. And yet, with comparatively rare exceptions, do we find monumental honor paid to their memory. There are some few statues in Europe erected to the great in these callings; there is also a duplicate of the Stockholm Linnæus erected in a Chicago park; but the profession has had little honor in this direction. In a certain sense these men who have done so much for the comfort of the race do not need such memorials. Their names are household words with the lovers of landscape gardening, trees, flowers and plants, and these are legion and are increasing every day as the higher civilization reaches out. We say, then, they do not need monumental record; the simplicity of character which close communion with nature develops also shrinks from the thought of such an expression of public gratitude; but nevertheless the people owe recognition to the men who have been the means of bringing about such inspiring and helpful conditions in landscape and horticulture as bless this country today. Among others, think of Strauch and Downing, for instance, and the results of their life's work! Throughout the country, it may justly be said, that all our parks and cemeteries, in their landscape development, owe tribute to such as these. "Peace hath higher tests of manhood than battle ever knew," and memorial art should be invoked far more freely to honor her heroes.

WE are hardly prepared to say that the increasing demand for mausoleums is due to any more pronounced objections to earth burial than have always existed. It might perhaps be explained by the fluctuations of demand, which occur in most lines of trade, and lead to the

temporary boom in one class of production over another. It is clear, however, that the growing tendency to ostentation, observable in certain directions may lead those financially able to indulge such weakness, into choosing a mausoleum for a family burial place and memorial, for the reason that it affords more display for a given amount of expenditure. This added to the fact that it overcomes any prejudices that may exist against earth burial, is a telling argument in favor of the mausoleum. Great improvements have taken place both in the design and construction of this class of memorials, and that there is a wide field to cover is evidenced by the range in cost between the unpretentious tomb designed to contain two or more bodies to that of the Pacific Railroad magnate costing a quarter of a million dollars, or the Mackay mausoleum in Greenwood cemetery, Brooklyn, of still greater expenditure. Another feature to note in the mausoleum is the distinctive quality of art that is being drawn upon for interior decorations,—elaborate mosaic work and flooring, stained glass windows of high artistic excellence, original designs in doors and grilles of cast bronze, all prove, not only the diversity of interests combining in the development of this field of memorial work, but that artists of ability must be called upon for their best efforts in these several departments. Turning to the material of exterior construction, while by far the greater number of vaults are being built of New England granites, marble and Bedford stone are also being used for some very expensive structures. Diversity of material as well as of design is of course desirable, and to avoid monotony, necessary; but no less care is required in one than the other in certain respects, for a memorial, faultless in design and construction, will fail of its purpose if built of materials incapable of withstanding the rigorous climatic influences to which it is exposed in most cases. Design and construction, however, are the two governing features of the mausoleum. The architect who can design a palatial residence or a monster business block, frequently fails completely in carrying out his plans for a mausoleum which on paper appeared to be a "pretty design." Construction of this class of memorials has not received that careful attention so essential to their permanence, and in view of the increasing demand, it is of the utmost importance that both their design and construction should be entrusted to those who by practical experience have proved their competency for such work. Mistakes which can be remedied at comparatively small cost in many phases of monumental work are generally disastrous in mausoleum practice, for although the principles involved are few, they are vital.

SOME DIFFICULTIES OF THE PARK SUPERINTENDENT.

From the northeast corner of a park in a western city, a walk leads in a southwesterly direction, descending almost too rapidly for comfort into a ravine which has been utilized for a lily pond and for various flower beds. Further to the south this ravine is crossed by another somewhat broader in which a lake has been formed. Some of the effects about this lake are very good, and, looking to the farther end of the water surface, the view is terminated by a group of willows. Being a stranger, I supposed the park to extend much farther than the willows, but, on walking to this group, found that they were at the boundary and learned that the people living opposite had been making efforts to have these trees cut down so they could look into the park. Following the ravine in the other direction, that is toward the western boundary, I found a waterfall and other narrow ravines whose sides were covered with thick foliage. The effect was very natural and very pleasing. Native shrubs had been used, so that one would not suspect that much of the material had been planted. The ravines curved enough to excite one's curiosity as to where they led to, the upper ends being hidden from view. Although nearly ten weeks elapsed without rain, the leaves of the hazels, sumachs, thorns, oaks and other trees and shrubs were of a fresh green color. I learned afterwards that one of the Park Commissioners recently appointed, wanted to have all this "brush" cut out. The "brush" and the red and burr oaks were really the most pleasing features of the park.

Going further, I found a boundary belt of pines, and learned that one of the park commissioners whose house was on the opposite side of the street from this belt, avowed that he obtained his appointment for the sole purpose of getting these pines cut down so that he and his neighbors could look into the park. He commenced first on some maple trees and when these were destroyed saw that he had made a mistake, and so the pines were spared. Some of the elms and oaks in the interior of the park had had all their lower branches removed, this treatment, of course, destroying their beauty. There were rather too many trees in some places and one felt that it would be an improvement if some of them were removed entirely so that a longer view could be obtained. The superintendent said he had suggested this to one of the Park Commissioners and in doing so he used the word "vista." "Oh, h-h," said the commissioner, "if you want a vista, go out on to the prairie." When the park was established, an effort was made to keep its management entirely out of politics by having

the park commissioners appointed by the judges

One would suppose that a judge would use his influence to select for a park commissioner a man of refinement and good taste, without regard to whether he was a republican or democrat, but it seems that such was not the case. Instead of giving the superintendent authority to hire and discharge men, and requiring him to secure the best results for a given amount of money, the appointment of all employes is made by the park commissioners as a reward for political activity instead of on account of fitness. I have often found that men appointed as park commissioners do not even know the object of a park. Instead of realizing that it exists, or should exist, for its scenery, for the contrast it gives to crowded buildings, they suppose it exists to form a pleasing front yard for the commissioners and their neighbors who live in its vicinity, and to furnish places with which to reward certain of their constituents.

O. C. Simonds.

THE DUTIES OF PARK COMMISSIONERS.*

Large and small public open air spaces in all communities, and especially in crowded cities, are universally recognized to be of the greatest value in maintaining and increasing the health, pleasure and knowledge of all the citizens and in adding to the attractiveness of the city as a place of residence.

They add to the pleasure and health of those who are full of life and vigor by providing for the active forms of out-door amusement at riding, wheeling, boating, etc., amid attractive surroundings, and to their knowledge by providing an opportunity for the study of plants, animals and birds under the most favorable conditions.

It is of even greater importance that these public recreation grounds add to the health and consequently to the producing capacity as workers in the community, of persons who are weak, tired, nervous, exhausted and sick, by providing and making accessible beautiful landscapes and scheduled natural retreats made interesting and attractive by an abundance of plants, flowers and birds that may be enjoyed with a feeling of perfect security.

It is the duty of park commissioners to see that as much of all this is provided as the means at their disposal will permit; to see that the various forms of recreation are provided in such a manner that they will not interfere with each other; to see that the needs of those who are worn and tired are not neglected in providing for the demands of those who are vigorous, energetic and aggressive.

It is the duty of park commissioners to seek the most expert advice in solving the problems presented in the selection of park lands and in designing of the various features of a park system. It is not to be expected that such problems can be solved successfully by men whose whole lives have been devoted to other pursuits. It is true that some men who are not professional park designers are so well fitted by nature and so well

*Paper read at the Minneapolis Meeting of the American Park and Out-door Art Association, June, 1898. By Christian Wahl, President Board of Park Commissioners, Milwaukee, Wis.

equipped by travel, study and knowledge of the practical requirements involved in the construction of parks that they have secured most artistic results. This, however is exceptional.

The ideal park commissioner should be a person who represents the highest intelligence of the community, a person having refined tastes, who has traveled enough to be familiar with the best examples of park design, a person having a full appreciation of nature in all phases, one who in every respect is a cultivated man, broad enough to appreciate and sympathize with the needs of the whole community and with sufficient force of character to prevent any one element in the community from gaining an undue advantage over another; an honorable and public spirited man who will not use the position to gain personal or political advantage. He should be able to present in a convincing manner before legislative bodies the needs of the people as represented by public parks. He should be a man who is able to appreciate that a well designed public park is a work of art which is to grow into its full beauty only in years and which can be wholly ruined by injudicious changes.

He should be a man of sufficient leisure to allow him to devote at least a portion of his time to the parks under his care, not so much to personally superintend actual work, but to assure himself that his ideas of those of the consulting landscape architect are carefully carried out.

The office of park commissioner should be unpaid and honorary; it should be unpaid so as to obtain the services of gentlemen who consider the honor connected with such a position sufficient reward for their services; it should be unpaid so as to make it undesirable to professional office-seekers.

A park, being a living, growing thing, designed with an object in view that can only be realized in years should be continuously under one management, hence the offices of park commissioners, and especially the positions of park employes should be of long terms and should be free from the control of politics. Every encouragement should be given to park employes to increase their efficiency so that from their own ranks competent persons may be developed and educated for higher positions, especially as they are familiar with the growth of the parks and all local conditions connected therewith.

A park is to remain a possession of the people for all time, and as the measure of its perfection is to be determined by the thoroughness of its preparation, a park commissioner should see that all work is done in a thorough manner, all work should be fully completed before improvement on a new portion of a park is commenced. What is finished should look finished, and what is incomplete should rather be in its first, rough condition than to appear half finished.

It should be the duty of park commissioners to see that the people's pleasure grounds are made readily accessible, both to the poor and to the rich, especially the former. The humble buggy or light vehicle of the tradesman carrying his whole family should be as welcome as the stately carriage of the banker. All should feel that they are part owners of the parks. Visitors should be given the utmost freedom consistent with the preservation of plantations and structures; and they should not be required to "Keep Off the Grass" everywhere.

Policemen should not be permitted to assume a

threatening and aggressive air with a great display of club and undue authority. They should nevertheless be vigilant to protect and to act promptly and judiciously in removing objectionable persons and in preventing dangerous play or fast driving or bicycling.

Visitors should have a sense of absolute security while in the park. They should be encouraged to have a sense of ownership in the park, and to quickly resent any acts on the parts of visitors or employes that interfere with the comfort and pleasure of others.

Park commissioners should give every proper inducement to encourage people to use the parks freely for picnics or private parties; most of all should this be the case with the pupils of our public and parochial schools. Especial privileges should be granted as well as assistance given to them in planting trees on Arbor day, thereby planting into their young hearts the love of trees and the beauties of nature generally.

Indeed it is happily a growing custom in our country to thus encourage little children to plant trees in parks and other suitable places on Arbor Day, and too much can hardly be said in support of this idea. The child becomes associated with that tree, so to speak, becomes interested in its growth and development, learns thereby to love trees in general and to carefully observe their interesting peculiarities and characteristics. Nothing softens and broadens the human mind so much as observation and love of nature in all its phases, and so we teach our children not to destroy flowers nor innocent animals, and it has long been considered as an excellent form of early education to interest them in gardening. So with the Arbor Day theory, the child, if it possesses any imagination at all, must feel its own life and career to be more or less associated with the tree to which it put spadefuls of earth and watered for the first time. That child will like to frequent the place where the tree grows. His own life is bound to that of the tree, as it were, and through the vicissitudes of existence they pass closely connected together. Indeed, it is a beautiful idea—this of the children practically celebrating Arbor Day—full of poetic imagery and the foundations for thoughtful philosophic considerations of life in all its phases. It is an idea that should take root and spread, like the tree itself.

The parks of the great English metropolis have aptly been called "the lungs of London", and too much stress can hardly be laid upon the all-important fact that through the parks the poorer classes of city denizens can learn to meet nature face to face. All that mental helpfulness of trees, blue sky, green grass, flowers and every other characteristic of our Eternal Mother, can at least be shown them in miniature in the parks, and who can be so thoughtless as to suppose that any day passes without some overworked, poverty-stricken, life-despairing soul going back to the over-crowded, heated slums that are his only home, nearer to happiness and partial content for the breadth of a purer and nobler life that a visit to the parks have vouchsafed him?

Everyone knows that park commissioners are unpaid, their positions being purely honorary, however hardworking, if they are faithful to their duty. But for them a high recompense lies in the consideration of the pleasure that their efforts give to tens of thousands, the profit that may accrue to all citizens from the facts already noted, and the healthy, happy feeling that actual good has been done to so large a part of the inhabitants of the city in which they officiate.

ROYAL BOTANIC GARDENS, KEW, SURREY,
ENGLAND. VI.
PALM HOUSE.

The curvilinear Palm House designed by Decimus Burton, was built in 1848. It cost, approximately, £30,000. Its central portion is 138 feet long and with each of the two wings 112½ feet constitute the entire length of the structure as 363 feet. The center is 100 feet wide and 62 feet high, the wings 50 feet wide and 26 feet in height. Ventilation is exclusively from the top by sliding sash (6 feet by 8 feet); these are manipulated by a crank and windlass.

The walks in the wings are of cement.

Temperature is maintained at 70 degrees and this requires eight large wrought iron tubular boilers connected with over 4 miles of 4 inch hot water pipe worked on the expansion system. The house is founded on a 4 foot terrace. Supporting the house is a stone foundation rising 3 feet above the terrace level. Within, a 3½ foot stage encircles the house and ranged underneath it throughout are ten hot water pipes. In each wing the floor for the huge tubs is of iron grating; underneath running longitudinally with the grating floor of the house 24 four inch pipes are disposed. In the large central dome are solid beds for planting out palms. In addition to the ten under each stage on both sides, fifty-four four inch pipes run under the grated walks longitudinally with the house. Walks vary in width from 4 to 10 feet. One 3 inch pipe encircles the dome at a level of the gallery walk and two 3 inch pipes travel the length of each wing about 3 feet from the summit.

Stoking requires but part of one man's attention during the night. Nothing else but coke is burnt as fuel and that is conveyed to the boiler room, as are also the ashes removed, via: a long tunnel and four wheeled cars on tracks to and from a service yard.

About 1,000 chaldrons of coke are annually burnt in heating this house.

It is interesting to review experiences undergone in bringing about the successful management of this house. When first erected it was, we believe, the largest glass structure in existence and remained the largest in England until the recently built conservatory of Sefton Park, Liverpool, was completed. To the engineers the problem was, how to utilize the least bulky and light obstructing material and maintain the necessary strength and durability; how to avoid currents of air and withal provide a perfect ventilation and further, to so distribute the heat as to preclude the necessity of subjecting the plants to an undue amount of dry air occasioned by the loss and radiation of heat. It was more or less experimental. Whether butted or lapped—the roof glass will usually show crevices, an item of considerable import in a house to be kept at 70 degrees. Previous to 1894 but six boilers and less than 3¾ miles of 4 inch pipes were used but since this has been increased by 10 additional pipes running around the inside of the house and 2 more boilers.

True, the maximum cold will approximate only 20 degrees Fahrenheit, and there occurs scarcely no wind

but even then the cubic contents of the house has a comparatively large exposure. In contrast we would mention the Phipps conservatories at Pittsburg. Here the main conservatory is quite low, and covers a large ground area, thus facilitating its heating and as in Lincoln Park, Chicago, where cool plants are largely grown materially assisting their successful cultivation.

In 1868 a renovation in the heating plant was effected in the Kew Palm House reducing thereby the number of boilers from 12 to 9 and generating—as estimated by Sir Joseph Hooker—10 per cent. more heat. Referring to this house in 1869 report, Sir Joseph remarks: “‘spray jets’ have been fixed to the roof, each of which disperse a misty shower of 12 feet diameter over the plants, which is in every way preferable to the old system of syringing” a decision that was on further experience reversed. Gratified with the first alteration tending toward the systematizing of heating apparatus Sir Joseph a second time—1879—advises that the old boilers be substituted by those of more modern manufacture (those first used in this house were Sylvester’s “fluted conical.”) Heretofore the house was heated entirely from below but condensation in the dome was so rapid as to cause pools of water to collect on the gallery walks, and, more important, created a cool downward current from the dome and from the wings toward the dome. On this the then Director commits himself thus: “I feel satisfied that no plant house of any considerable height, whether built of wood or of iron, should be unprovided with a flow and return pipe at an elevation of at least half the height of the building both for the good of the plants and the preservation of the material used in construction.”

Plants grown in this house are: the hotter palms and Dendrocalamus, Zamias, Cycas, Dioons, Eucephalartos, Dombeyas, Kennedyas and on pillars and rafters many of the tropical climbers that have deciduous or thinly disposed foliage during the winter.

Among the plants particularly noteworthy are: Sabal Black burniana, Phoenix farinifera, Macrozamia Hoper, Caryota furfuracea, Dioon Spinuloseun, Clorya macrophylla, Diplothemium candescens, Wallichiadensi-flora, Stevensonia grandiflora, etc.

Six gardeners tend the house and patent adjustable ladders enable one to move in every part of the vast space within for cleaning, tieing, pruning, etc.

Emil Mische.

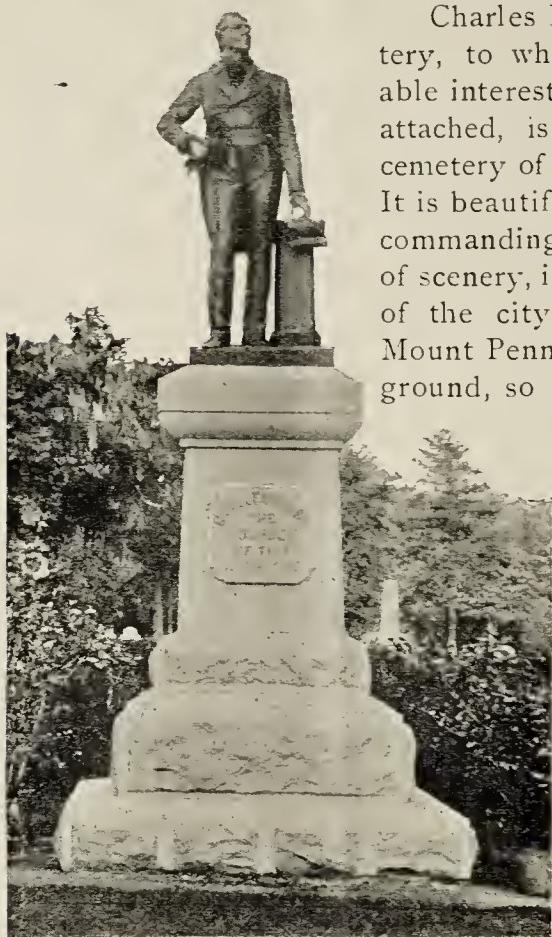
In England the first cost of making a highway is estimated at \$4,000 per mile; in France it is \$6,000 and in Italy \$3,000 per mile. The principal item of cost in England arises from the necessary purchase of property; in the mountain districts of France from the nature of the country through which the roads run.

* * *

There are two general systems of road making—the Macadam and the Telford. Macadam preferred a yielding foundation, and laid broken stone directly upon the earth; according to the Telford system, large blocks were placed as a foundation on which to lay smaller crushed stone with a covering of gravel, sand or ashes.

PARK AND CEMETERY.

CHARLES EVANS CEMETERY, READING, PA.



MONUMENT TO CHARLES EVANS.

Charles Evans Cemetery, to which considerable interest has always attached, is the leading cemetery of Reading, Pa. It is beautifully located, commanding a panorama of scenery, including part of the city itself, with Mount Penn in the background, so characteristic of that part of Pennsylvania.

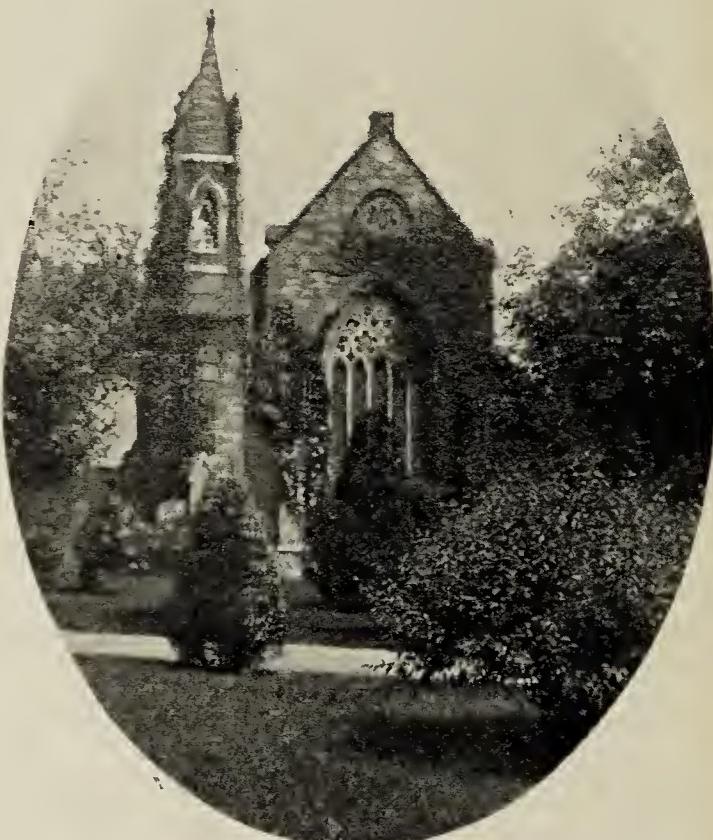
It was founded by Charles Evans, a public spirited citizen of Reading, and a well-known Pennsylvanian lawyer, who, having no children cast about him to de-

vise some scheme of disposing of a portion of his property which would redound to the benefit of the people of Reading. This finally took the form of establishing a cemetery, and not leaving it for others to carry out, he selected a site, purchased the land and appointed trustees of his choice.



THE PAVILION.

The necessary steps having been taken, to incorporate the trustees, the Charles Evans Cemetery Company was organized March 28, 1846, and Mr. Evans conveyed to it some 25 acres of land. A cash gift was then made of \$2,000, a further bequest of \$10,000 in money was made in his will, besides six-eighths of the residue of his estate, which upon final settlement reached the sum of sixty-seven thousand dollars, making with the land a total endowment of over eighty-four thousand dollars. He died September 5, 1847 in the eightieth year of h i



THE CHAPEL.

age and was buried in the cemetery he endowed.

The original plat of the grounds was made by Messrs. Carver & Hall, which plan in all essential features has been carried out. To the 25 acres provided by Mr. Evans, there has since been added some 28 acres additional. The main entrance with building attached, built of red sandstone of Gothic design, was constructed in 1847-49 at a cost of \$18,879,78.

In 1852 work was begun on the chapel, which is illustrated herewith. It is built of red freestone in the second-pointed gothic style, and is a much admired structure. It was designed by John M. Gries, a Philadelphia architect, whose career was cut short at the battle of Fair Oaks. The interior of the chapel is 53 feet long by 30 feet wide, divided into aisles and a nave, separated by four

arched arcades. The roof over the nave is raised by a clerestory so that its cornice is $26\frac{1}{2}$ feet above the pavement. The floor is paved with Bremen tile. Each gable of the nave contains a large window filled with tracery, texts and monograms. In the flank walls of the aisles the windows are of exquisitely rich stained glass. The bell tower is 50 feet high from base to top of finial. The chapel cost \$18,818.96, and as will be seen by the illustration it is being rapidly clothed with ivy and ampelopsis, giving it a very picturesque appearance.

A large and roomy superintendents house was built in 1850, and later other buildings were constructed for working peoples' dwellings, etc.

As will be readily inferred from the illustrations the cemetery has not hitherto been conducted on the lawn plan, indeed it has been a difficult matter to educate the lot-owners in that direction in this locality, and mounded graves are insisted upon. Nevertheless in a new section recently opened, granite corner posts set by the cemetery company are used, and grave markers are limited to a height of ten inches.

With the exception of the new sections in which grass paths are the rule, the walks are covered with gravel. The roads are all macadamized and are in good condition, and the approach and driveway to the entrance have recently been paved with asphalt blocks.

A modified form of perpetual care is adopted, that is to say four cents per square foot of lots sold is set aside for the general care of the cemetery. The cemetery cuts the grass, cleans the walks, straightens all leaning tomb stones and keeps them in repair to a certain extent. Without a better knowledge of the conditions governing the cemetery, it is safe to say the sum set aside is utterly inadequate to the demands of perpetual care, as that is now understood in advanced cemetery practice.

Considerable progress is being made in the removal of hedges, fences and copings, which are taken away without expense to owners and the sale returns from same is either returned to owners or ex-

pended on lots. In 1897 there were removed 39 hedges, 10 iron fences and 2 copings. Over 21,000 interments have been made in the 52 years existence of the cemetery.

A few words will explain the illustrations. The opening cut shows the monument erected in honor of the founder, Charles Evans, by the Board of Directors in 1890. It is located on a lot just inside the entrance, reserved for the purpose from the first. The figure of the founder is in bronze.

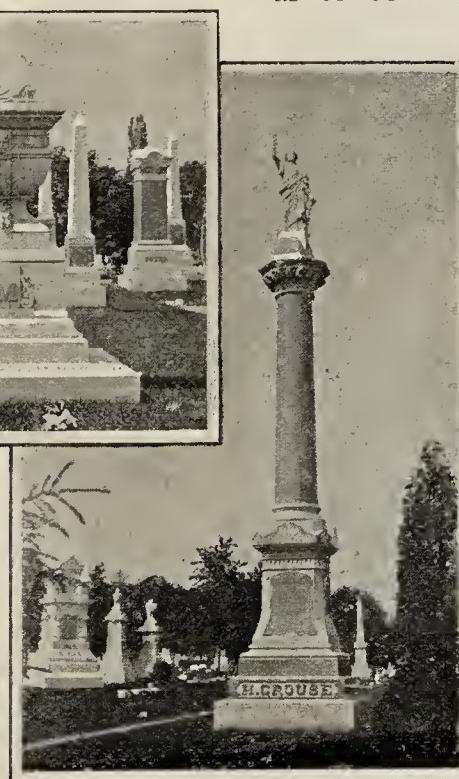
The "Pavilion" is a very attractive feature, affording a cool and refreshing rest, and so located as to command views of the surrounding country for distances ranging up to 20 miles, in three directions. It is built of white hill stone from Mount Penn, at a cost of \$2,000, and with the exception of roof is entirely covered with ampelopsis. It was the gift of a member of the Board of Trustees.

The chapel is described elsewhere in this article.

The group of photographs on this page, is fairly representative of the class of monuments and are suggestive of the condition of the cemetery. The plate on the left shows the Wilhelm monument. The centre picture gives



WILHELM MONUMENT.



CROUSE MONUMENT.



THE OLD STONE MAN.

the Henry Crouse monument—a beautiful polished granite shaft surmounted by a figure of "Hope" in granite. The monument on the right known as the "Old Stone Man," is a landmark of the cemetery. It is one of the eccentric features so common in our older burial grounds, and which happily, will be unknown in the future under the rules and regulations governing the larger cemeteries at the present time. It was cut 50 years ago and used in business by its owner, the living model, but having outlived its usefulness it was placed by said owner on his lot in Charles Evans cemetery.

The two views of the frontage on Centre avenue, present conditions before and after the removal of

the trees. The trees were of various species, but were said to be dangerous on account of age with consequent falling of limbs, and were in the way of so-called improvements—flagging and curbing. They have been replaced by young Norway ma-



CENTRE AVE., BEFORE REMOVAL OF TREES.



CENTRE AVE., AFTER REMOVAL OF TREES.

ples. The contrast in the illustrations teaches a lesson, and clearly suggests the preservation of old trees rather than their destruction. Generations must pass away before the young trees will meet every consideration conserved in the old ones, and from a certain standpoint they never will.

We are indebted to Mr. John A. Hepler, assistant superintendent, for the photographs and details from which the foregoing has been prepared.

A PLANTING CHART FOR GARDEN PLANTS. II.

Some thirty years ago a local Horticultural Society in India proposed the extension of a Government Garden, and the then President of the Society and Commissioner of the District (a Mr. Breek's if I remember) seemed to take considerable interest in a proposal which the accompanying plan makes clear.

The proposal was to "trace" a road from the summit of "Dodabetta" (a mountain of nearly 9000 feet) down to the first "saddle" at a grade of 1 foot in 18, and plant allied groups of trees and shrubs in the spaces between the roads.

Part of the mountain was occupied by a Government Cinchona (quinine) plantation; other portions were in private plantations, and still others in the hands of natives; no steps were taken to acquire these latter up to the time of my leaving India.

During the interval the *Genera Plantarum* of Bentham & Hooker has been completed and as I have previously remarked in "PARK AND CEMETERY," their elaboration of De Candolles groups is better fitted to a well balanced planting than any with which I either am now, or have been acquainted. The faults are that a few of the groups such as Rosales, Unisexales, Narcissales and Glumales are too large, and I may add too, that they are too uneven in their designations. They do not form a consistent series of names, and their terminology is far from uniform. Even at the expense of some violence to the Greek and Latin it would be worth while to remedy these things. As a preliminary the alliance terms used by Lindley, Bromhead, and others, have been partially restored in these papers, and such terms as Euphorbiales, Urticales, Musales, Cyperales, etc., are under consideration. They are not new to gardeners, and there seems no sufficient reason to set them aside for others less well known.

Good allied groups offer abundant varied material for the landscape gardener anywhere in the fertile parts of the world.

They are composed of tribes of genera and species, and it seems to me that the tribes with a uniform terminology of eæ are better than the existing confusion of orders, sub-orders, sub-tribes and anomali. I was surprised sometime ago to receive an opinion from a leading scientist to the effect that no one thought it necessary to render the tribal characters of the *Genera Plantarum* into English! He differs in his opinion from any plantsman with whom I am acquainted. A good catechism with Books for the Divisions, Chapters for the Alliances and Verses for the full tribal characters would probably do more to simplify plant knowledge than any one thing. But I often doubt if scientists really desire to simplify anything. If they do why all the confusion of tongues? There is but little excuse for it now. So much for the mere "Teufelsdrochiana."

The disposition on the ground of plants themselves so that their distinctive features and beauty may be displayed to those who care or care but little to know them, should always be simple. Any handbook should correspond, and the Botanies of the English-speaking world do in a varied way agree as to the great divisions. But I may again assert that neither Bentham and Hooker nor any other Botanists have ever proposed the effective transfer of their lineally arranged minor groups to



LANDSCAPE CHART OF BOTANICAL ALLIANCES, ADAPTABLE TO THE PLANTING OF
PARKS, CEMETERIES, ARBORETA AND GARDENS.

Copyright 1898. By James MacPherson.

the ground. A landscape cannot be planted to please on the basis of the orders.

In the accompanying plan the Dicotyledones commence at the lake with the Ranunculus alliance, and the sequence of the *Genera Plantarum* and allied works is followed to the top where it ends with grasses. The ferns are also included. Those who prefer "*Die Pflanzenfamilien*" would of course prefer to march up the hill, begin there, and then march down again.

For a park the most noble trees and thrifty shrubs should alone be planted, and the natives should predominate. An arboretum may include far greater variety. For a garden the herbs are included. These are on the plan in dots representing

six feet or so wide round beds on the grass, because in such shape they are easy to mow around and manage with a minimum of dug ground; and besides in masses they make a far more effective display. They look natural too—not formal. Of course only the very best should be selected in each allied group, and the method of planting by intersection should be employed more frequently. Two species in intersection may often keep a bed gay throughout the season if one be a low early, and the other a taller late flowering species. But almost anyone in a new locality will need to test the duration and well doing of perennial and annual herbs in the nursery. This will be an advantage affording opportunity to propagate whatever is best

in the meantime. Every park and garden should have a nursery and trial ground, and of course a superintendent who knows how to manage it.

I may now perhaps say a word about the cemetery. You know my sentiments about the general run of cemeteries. No gardener can view with complacency the invasion of the marble slab.

But I have often wondered how it happens that most cemeteries are of the general run. I should think the large cities at any rate would develop a sort of out-door Westminster. Why cannot 50 or 100 wealthy men club together and buy some hill capable of culture? There are lots of hill farms. Put in \$1,000 each say, and have the right to build a mausoleum on such sites as are indicated by the figures on the plan. They are often more than 100 or 150 feet across, and could be arranged in any size. Then ground in the open spaces could be sold at high prices to anyone willing to erect such monuments as would pass a committee of architects. Such a cemetery planted as suggested would be worth talking about. Something like this is done in some of the British colonies (Trinidad for instance) where a portion of St. Anne's Garden has become the local Westminster, and the resting place of a few distinguished men. The monuments might be combined mausoleums and plant houses containing the tender plants of each alliance and built in part of the Falconiere glass bricks which offer such splendid possibilities to the Horticultural Architect. A series of structures such as these might often be supplied from ornamental stand pipes on the hill-top with oil-fuel, water and electricity perhaps.

The roads are 33 feet 4 inches wide.

Trenton, N. J. James MacPherson.

WHITE ROSES FOR THE CEMETERY.

The chief consideration in a flower for the cemetery is continuous blooming. Roses are as truly ever blooming as any class of flowers that grow, provided the choice is directed to the varieties so endowed.

Hardy constitution is also a recommendation. Such roses, once established, are ornamental and satisfactory for a great length of years, and the lot in the cemetery, they adorn, will never be without flowers in bloom.

White is a delicate hue, in a refined sense, but in no wise, indicates a delicate, or feeble constitution in a rose. The fact is, that some of the hardest, freest and every way, the most available roses are pure white. The list here given may be depended upon to bloom freely in northern sections, bravely withstanding the rigors of winter, to the borders of Canada, windswept lake-shores, mountainous districts, where snows are heavy, as well as

climates still more trying, in the alternate freezing and thawing that characterizes southern sections, seem to have no more destructive effect upon them than upon the Hawthorn, or Oak. Hybrid Perpetual Roses, as a class, are hardy, but some are more so than others.

Among the pure white remontants, Perle des Blanche and Coquette des Blanche are not only hardy and free, but are continuous bloomers, and quite beautiful. Not even among Tea roses, the undisputed ever-bloomers, is there one that, in this desirable quality excels Perle des Blanche. The buds and blooms are borne in full clusters and are globular in shape. From early spring till autumn freezes into winter Perle des Blanche will be loaded with buds and blooms. Coquette des Blanche, too is pure white, but sometimes the outer petals will be tinged pink and the clusters are not as full in number as Perle des Blanche.

Loveliest of all hardy white roses, perhaps, is Mabel Morison, the fair daughter of the peerless Baroness de Rothschild, which is pink.

Mable Morison is a larger, fuller rose, than either of the foregoing, and quite as hardy, but does not propagate so freely. Perle des Blanche has a rich productiveness in shoots that put up freely from the main root. Each one may be detached, with young roots, and set in place, making sturdy rose bushes that will bloom freely in one year.

Rosa Rugosa or Ramosa, the Japanese rose, has almost evergreen foliage, and single white blooms, with yellow centres. The foliage is dark, shining green and the snow-white flowers cover the shrubs, in sheets. It is planted in hedges, as pruning improves its beauty; but isolated specimens are symmetrical and quite comely. Few rose bushes produce such full crops of flowers, and in the fall the hips or rose-apples succeed the blooms and are as bright as glass beads in scarlet and gold. Moss-roses are exquisitely beautiful wherever they bloom, but particularly so in the cemetery. They are crepy and fine in texture, heavily encrusted with green mossy calyx and stems, and with rich velvety leaves. There are two pure white moss-roses that are ever-bloomers, in the truest sense of the word: Blanche Moreau and Perpetual White, and like all roses that grow on rhizoma roots, are hardy and propagate freely.

No flowers are more beautifully appropriate for this sacred purpose than white roses, and among them all, none are more desirable than the varieties here named.

New Orleans, La.

G. T. Drennan.

Investments in park property give large returns to the community.

MONSTROSITIES IN TREES.

The number of strange and curious forms which appear as varieties of trees are legion. There is scarcely a tree or shrub which has long been in cultivation but which has its cut-leaved forms, its variegations of red, white and yellow, its pyramidal form, its weeping, and its trailing. Every oddity is preserved, and the nurseryman not yet satisfied must still perch a trailer upon a pole and give us a Weeping Mulberry or a Kilmarnock Willow.

It cannot be said but that any object which gives pleasure to mankind is useful. But why should men delight in having these strange plants about them? There is a state in man's culture which leads him to seek and care for that which is rare and odd. Later, perhaps, if he goes far enough, he learns to love that which is beautiful. Artificial oddities like the Kilmarnock Willow are valuable only for their strangeness because they are odd. They cannot be said to be beautiful though some of them may have a certain grace. They are useful only as curiosities and should be regarded as such, and if they have any place at all, it is, of course near the house.

Natural oddities, such as variegations, weeping forms, and others, have many beautiful things among them as the Weeping Beech and *cornus elegantissima*. They are nearer nature and have less of strangeness than the others. But, as a rule, they must be regarded as monstrosities and should not appeal to the cultivated nature as would more natural forms. They might be well upon a lawn taken as individual objects but in a wild group they would appear wholly out of place. They do not appeal to us because they are not consistent. We have a feeling that they are not able to take their part in the struggle for existence, that as sure as they did they would go to the wall, that their strange variegations and curious forms unfit them to battle with neighbors whose shapes and colors have enabled them to withstand the struggle of centuries. Since they have all appeared as seedlings and any seedbed is likely to exhibit some of them, we have a right to think that in nature this variation has always occurred but that they were too ill-adapted to the struggle and finally ceased to exist. Hence as a part of landscape they seem out of place. They are inconsistent, out of keeping with the rest of the scene. We may delight in them near our dwellings where they seem in a sense under a protecting care, but it is a question whether in the end we should not be more pleased with more natural and hence more consistent beauty even there. The same principle may be extended to exotic plants in general where they do not seem in harmony with our native flora. It is not to be forgotten, however, that it is as important in the adornment of a lawn that a

shrub should always be fresh and neat in appearance as that it should be natural.

Much stress is laid upon this matter of consistency. We have it from Downing that beauty is obtained only when the different portions of the picture are at unity, and hence consistent with each other. Unnatural forms, unsuited to the struggle for existence seem inconsistent in a natural landscape, hence in them as a part of landscape there is no real beauty.

Rochester, N. Y.

A. Phelps Wyman.

TWO NATIVE UMBELLWORTHS.

ANGELICA ATROPURPUREA.

This is a huge American umbellwort, rather rare in southeastern Michigan. It grows to the height of six to eight feet at least; the stem dark purple, very smooth and highly polished; with immense, finely divided, very smooth, bright green leaves. Umbels many flowers, not very pretty, greenish white. It is, however, a massive and conspicuous plant, suitable for places in landscape work, and to see it in its best development it should be scattered singly about.

* * *

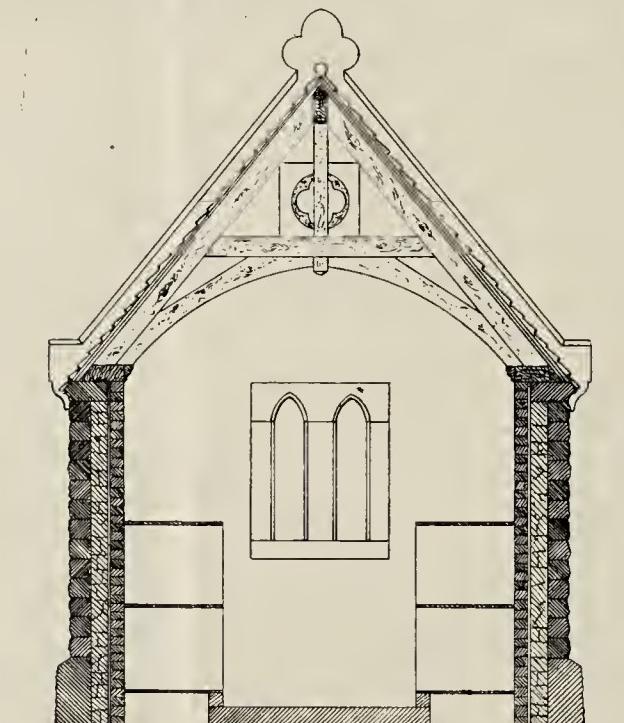
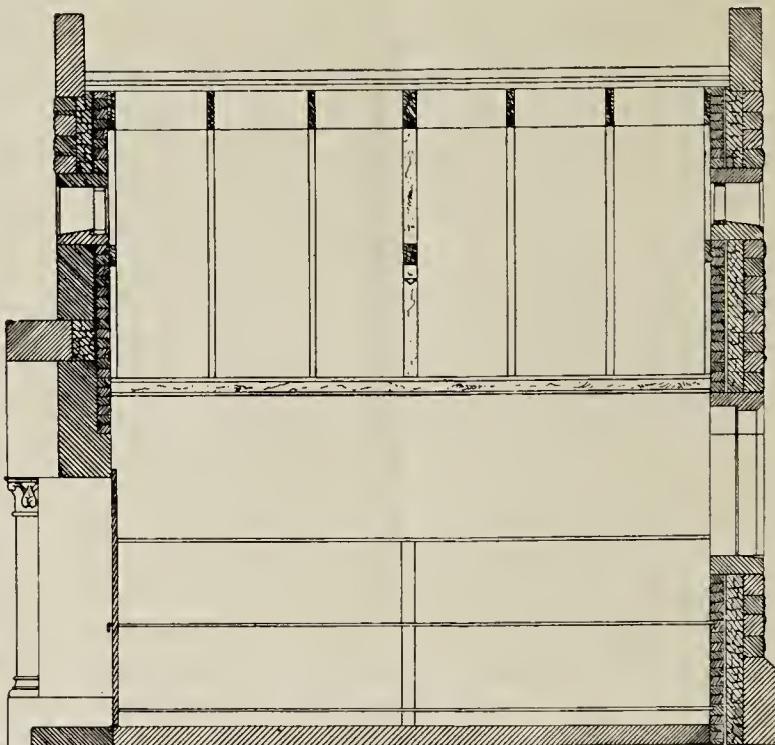
HERACLEUM LAVATUM.

For many years European and other species of heracleum have been cultivated in European parks and gardens, but, so far as the writer is aware, little or no attention has been paid to our native American species, our most gigantic umbellwort. Certainly, in a wild state, with its huge leaves, tall robust stem, towering to the height of seven to ten feet, topped with gigantic umbels of very pretty white flowers, it has a massive and grand appearance, and certainly commanding one's attention.

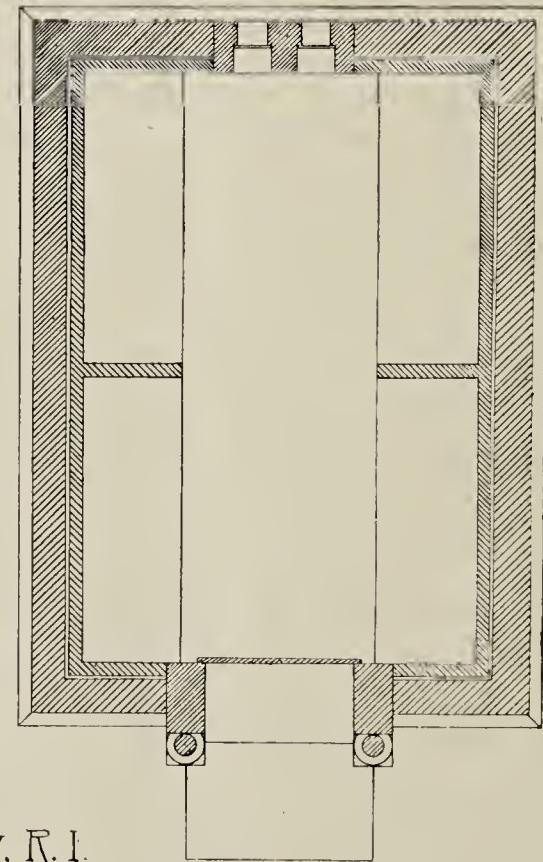
A year or two ago a seed accidentally came up in the writer's grounds and was left to grow that this plant might be fully tested. This spring it early sent up its huge, massive leaves, each consisting of three leaflets one foot or more long and wide, and speedily excited the interest and admiration of visitors, who wondered what that grand plant could be. At three feet high, with three or four huge leaves, it was certainly a grand tropical-looking plant; well worthy of a conspicuous place in any grounds, far superior to what it would have been in a wild state.

But the climax was reached early in July, when it put forth its huge umbells of very handsome pure white flowers; by the way, very good in bouquet making. But when seeds were formed its beauty began to fade, and I cut it down. It at once sent out two or three larger leaves from the root, and still continues at least conspicuous.

Wilfred A. Brotherton.



RECEIVING TOMB
RIVER BEND CEMETERY
DESIGNED AND ERECTED BY
THE SMITH GRANITE CO.



WESTERLY, R. I.

RECEIVING VAULTS FOR SMALL CEMETERIES.

Receiving vaults are becoming an indispensable adjunct in all cemeteries, and even in the smaller burial grounds the convenience of a vault in which to hold bodies until interment is made are greatly appreciated.

The illustrations above give some details of a small structure which includes the latest experience in ventilation and drainage. The neglect of these

all-important factors, from want of knowledge perhaps, created aversion to the receiving vault in former days, and it is well known that a few years ago some of the vaults, even in our finest cemeteries, were dangerous menaces to the health of those entering them, from lack of proper provision for ventilation. A receiving vault, properly constructed, should be both permanent, dry within, and have a constant flow of pure air.

WHAT DO YOU DO WITH YOUR LEAVES?

This is a question often asked as the fall season annually returns, and in both the park and cemetery work it is an important one. The decaying leaves under natural conditions fulfill a very important office in nature's laboratory, but in the more artificial methods of man to compass nature's handiwork, the fallen leaves become more or less a problem that has to be solved. In the following will be found some suggestions from actual experience in the question:

If time and opportunity are favorable we compost leaves by themselves, usually in pits. My experience is that leaves raked from sections in dry condition are bulky to handle and if mixed with dry loam will not rot. If, however, they are raked up when wet with dew, rain or snow, and are firmly tramped into pits they will rot in very short time. Oak and Beech leaves do not rot as readily as other leaves. If pressed for time we sometimes burn them to get rid of them but prefer to compost them.

Bellett Lawson.

* * *

We mix them in with a proper quantity of manure and good sandy-loam and thus prepare the best compost for top-dressing lawns. In preparing this material, a pit or a low piece of ground should be selected that will cause rapid decay of the leaves and it must be frequently turned over.

B. D. Judson.

* * *

The leaves are beginning to turn and will be falling. Do not rake them up and burn them but save every one, as there is nothing of greater value for a winter covering or, when rotted, as an ingredient for the compost heap. The fall rains are preserved by the covering of matted leaves, which prevents evaporation and preserves the heat in the soil. Long after the tops have experienced severe cold, valuable root action takes place when nature has been allowed to have her own way, and the protecting leaves and grass have not been cleared away. Nature is seldom unsuccessful in her plantings and we cannot do better than to follow her tactics in furnishing protection to the vegetation which remains out of doors all winter.—C. B. W., in *The American Florist*.

Government Assistance in Forestry.

That our government is finally awaking to the immense importance of giving some practical attention to the preservation and improvement of our forest lands is indicated by the following dispatch of *The Associated Press*, dated Oct. 16, which says:

'Practical Assistance to Farmers, Lumbermen and Others in Handling Forest Lands' is the title of

circular No. 21, Division of Forestry, by Gifford Pinchot, forester, soon to be issued by the United States department of agriculture. This circular states that the forest lands are owned by the government of the United States, by some of the states and by private owners. The private forest lands exceed in area those of the federal government and those of the states combined, and their preservation is of vast importance to the nation. These lands are held for profit, but as a rule the treatment they receive is calculated to destroy their value rather than to sustain or increase it.

Therefore the Division of Forestry has undertaken to provide a series of practical examples of improved treatment of private forest lands, in which the interest of the owner and the protection and improvement of the forest shall have equal weight. The Division, as far as its appropriation will permit, will aid the owners of both large and small holdings, on receipt of applications stating the situation, area and character of the forests for which working plans are desired. The plan proposed is for the purpose of promoting and increasing the present value and usefulness to the owner and to perpetuate and improve the forests.

GARDEN PLANTS—THEIR GEOGRAPHY, XXXIV.

ASTERALES.

THE VALERIANA, ASTER AND MUTISIA ALLIANCE.

(Concluded.)

Tussilago Farfara, "Coltsfoot," is a monotypic herb found in the temperate parts of Europe and

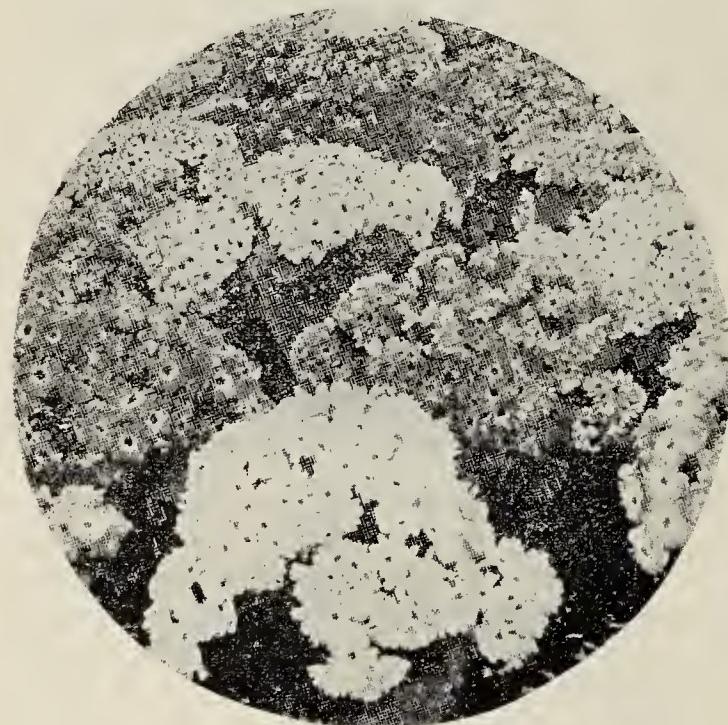


CINERARIA CRUENTA.

Asia, and adventive in Canada and the Lake regions of the United States. It is not much employed in

gardens but may be of use for covering banks and similar places. It prefers a rich humid soil. There is a variegated variety of this plant, sold under several names.

Doronicum has 15 species and several varieties of early summer yellow and orange or occasionally



CINERARIA HYBRIDS.

whitish flowered herbs of varying height.

Rhetinodendron appears to be a tree from Robinson Crusoe's Island.

Crassocephalum aurantiacum is a densely tomentose plant with yellow flowers kept in Californian gardens. It is a native of Java and belongs to a genus of 20 species found in the sub-tropics of Asia, Australasia and Africa.

Cineraria is a genus of 25 species natives of South and Tropical Africa. They are best known through the hybrid races. Many of the silvery leaved and hardy plants which have borne this name are transferred to other genera. The greenhouse kinds are so well known that it only seems necessary to point to their great improvement as shown by the group of plants grown by W. L. Marshall at Pansy Park, Massachusetts, compared with the species, and hint at the possibility of their becoming winter garden annuals in some of the frostless canyons of the South West.

Senecio is a very various and extensive genus of 960 species found in one kind or other all over the world. Many plants sold as Cineraria, Jacobaea, Ligularia, Farfugium, Cacalia, Kleinia, etc., are of this genus. They are sometimes shrubs such as the very silvery *S. Palmeri* of Guadalupe Island, and *S. Cineraria* used as a bedding plant but become wild on some parts of the coast of California.

Sometimes they are climbers such as the "German Ivy" of the florists, and often they are bad weeds such as the groundsel. *S. elegans* in double and other varieties are beautiful South African plants much used in gardens. *S. Koemperi* is known through its spotted leaved forms, and mostly sold as farfugium. *S. aureus* is the native "ragwort" and by no means devoid of beauty.

Bedfordia is in two species natives of Australia. *B. salicina* is in Californian gardens growing as a shrub of 12 or 15 feet high.

Lepidosparton squamatum is a monotypic broom like shrub of 4 or 5 feet high from the arid regions of the South West. The seedling plants are leafy and tomentose, but as they become older the branches are covered with closely pressed green scales, and terminal spicate heads of pale yellow flowers.

Dimorphotheca is a South African genus of sub-shrubs, perennials and annuals. They have white, yellow, purple and vari-colored flowers. *D. fruticosa* appears to be known in gardens under the name of "bush marigold."

Calendula "pot marigold" has 10 or more species. The double varieties of *C. officinale* are well known in gardens.

Arctotis in 30 species are South African annuals with showy white and red, white and orange, yellow and purple, pink and various other colored flowers which close during dull weather.

Venidium with 18 species from the same region have mostly yellow or orange flowers with dark



CALENDULA OFFICINALIS FL. PL.

disks. They were seen to some extent in the New York markets some years ago.

Gazania in 24 species is chiefly South African. They were once extensively used at the Crystal Palace and other places as bedding plants, and dur-

ing sunshine they made a superb display with their orange and black flowers.

Echinops "Globe thistles" are in 75 species found in Southern Europe, North Africa, and temperate and sub-tropical Asia.

They are herbs of a thistle like aspect with heads of blue or white flowers. Several are in gardens. *E. bannaticus* and *E. Ritro* with blue, and *E.*



CNICUS DIACANTHA.

sphaerocephalus with blue and also white flowers being among the most familiar.

Xeranthemum is a genus of annuals in 4 or 5 species from Mediterranean regions.

Cnicus is a "thistle" genus in 150 to 200 species often too familiar on all the continents. Some are ornamental and so also are several *Carduus*.

Onopordon "Scotch thistle" has 15 species in Europe, North Africa, and Western Asia. *O. acanthium* the kind most commonly grown becomes wild occasionally in the Atlantic states. Three or four others are in Botanic Gardens.

Centaurea is a large genus of perennials and annuals of varying aspect. There are 350 or more species in Europe, Asia, North Africa and North America. Some are almost cosmopolitan. The European "cornflower" is one of these and has var-

the only true native. It is found on the prairies from Louisiana westward to Arizona. The other wild ones are naturalized European kinds. *C. atropurpurea*, *C. nigra variegata*, *C. macrocephala*, *C. orientalis* and several with silvery foliage are a good deal appreciated.

Carthamus with 20 species in Europe, Asia and the Canary Islands yields the "safflower" the "globe artichoke" and some other useful kinds.

Mutisia as a tribe is quite variable and often very handsome, but they are not much known, and only a few shrubs and climbers will be mentioned.

Barnadesia is a South American genus in 10 species some of which may be useful in Californian climates. *B. rosea*, *B. grandiflora* and others are small pink flowered shrubs of considerable beauty.

Mutisia has 40 species all South American. Many of these are climbers with large showy orange or red flowers. *M. decurrens* from the Andes of Chili has proven hardy on walls in the south of England.

Gochnatia in 10 species are mostly South American too, but *G. hypoleuca* is found in southern Texas where it is a rigid shrub of five or six feet high, with inch long bright green leaves which are quite silvery beneath, and fascicles of whitish flowers.

Hecastocleis Shockleyi is a low rigid, desert shrub with dull whitish flowers—from Western Nevada.

Gerbera is an Asiatic and African genus of about 20 species of perennials and sub-shrubs. *G. Jamesoni* has orange-scarlet flowers of great brilliancy. A small shrub from the province of Yun-nan, China, bearing white flowers, was introduced a few years ago under the name of *Nouelia insignis* which appears to be of this affinity.

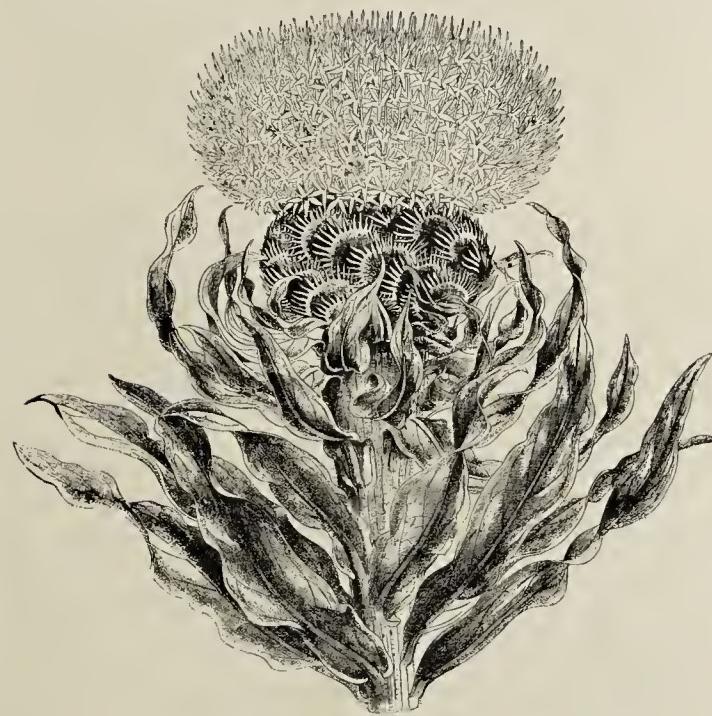
Proustia is a South American genus in 6 or 7 species mostly from Andean and sub-tropical regions. *P. pyrifolia* is a white flowered Chilian climber remarkable for its beautiful rose colored pappus.

Dendroseris macrophylla is a monotypic simple stemmed tree-like plant of 12 or 15 feet high, from the Island of Juan Fernandez. The stem is surmounted by a crown of large leaves and a drooping panicle of yellow flowers. It might possibly succeed in a climate such as that of Santa Barbara, Cal.

Cichorium in three species is the "chicory" and "endive" genus and there are but few more beautiful blue flowers than those of the chicory. The plant is unattractive however and too common, and the same may be said of the "hawkweeds," "dandelions" and some others of the tribe.

Trenton, N. J.

James MacPherson.



CENTAUREA MACROCEPHALA. (Very greatly reduced.)

ied greatly in the color of its flowers, while some have become double in gardens. *C. Americana* is

PARK AND CEMETERY.

PARK NOTES.

The Humane Society is making plans to erect a \$500 fountain at the public market of Quincy, Ill.

* * *

The Chamber of Commerce of Utica, N. Y., is taking the preliminary steps toward the establishment of a park system. The prevailing sentiment of leading citizens is for a chain of eight or ten small parks of from forty to fifty acres each rather than one large one.

* * *

A resolution was offered at a recent Council Meeting of Memphis, Tenn., to accept the Old Folks Society's gift of Winchester cemetery to be transformed into a park. The property contains 8½ acres, finely wooded and beautifully located. The city passed the resolution accepting the gift with thanks to the society, and agreeing to make the necessary improvements. The name is also changed to Winchester Park.

* * *

Ex-Senator Sawyer has presented to the city of Oshkosh, Wis., \$25,000 to aid in establishing a public library. Marshall Harris, a pioneer lumberman of the city, bequeathed his estate, valued at \$80,000, to Oshkosh for a library fund, provided the city raised \$55,000 and Mr. Sawyer made up the amount necessary, putting up \$25,000, thus creating a public library fund of \$160,000.

* * *

At the meeting of the Philadelphia Common Council last month Mr. Meehan introduced a bill to appropriate for park purposes the abandoned burial ground on Graver's lane, near Twenty eighth St., Chestnut Hill. This plot of ground adjoins the playground of the Joseph C. Gilbert School, and it is expected that, if the property is acquired by the city, the privilege of allowing the children of the school to use it as a play ground will be granted the Board of Education, as it is convenient and adapted for the purpose. The graveyard is known as the Union Burying Ground, or "No Man's Land," the latter title having been given it because, it is said, for a number of years it has not been in charge of any person or organization.

* * *

The influence of Town and Village Improvement Societies may become very far reaching. Besides the work which suggests their existence their organization is leading to the investigation of many important events connected with local happenings in early times. As an instance the Amesbury, Mass., society has been influenced to good work in designating many places of interest, such as the home of Thomas Macy, Ichabod Bartlett, ship-builder Hackett, and others of old colonial and revolutionary days. The renovation of the grounds where once stood the "Old Sandy Hill Meeting House," besides such efforts as decorating once vacant barren spots of land on street corners, is an exhibition of useful endeavor to improve the town along lines which but for the existence of such societies would never be done.

* * *

At a recent meeting of the Lenox, Mass., Village Improvement Association the following resolution was adopted: "That the Lenox Improvement Association would herewith respectfully and courteously suggest to the owners of estates in Lenox and vicinity the propriety of making such removals or cuttings in the trees which ornament their places, as will permit travelers on the highways to enjoy the beautiful views for which the region is noted, and which are now being so sadly obstructed and

will, in future, unless immediate action be taken, be entirely destroyed." A local paper says: There are few places where the fine estates have been so freely opened to the public as they have in Lenox and judging from the generous spirit always shown by the cottagers in this respect it is believed the above appeal will find a ready response, and we will add that such a course will be in line with refined ideas on landscape work.

* * *

As an example of the progress made in Australia, far in advance of that in the United States, relative to the traffic of bicycles, a letter was recently received by the Commissioners of Washington, D. C., which will be found interesting. A communication is addressed to the "City Clerk, Washington, D. C.," and is signed by John Clayton, the town clerk of the city of Melbourne, Australia, and asks, on behalf of the City Council, for information in regard to the regulations in force in this city governing bicycle riding. From the communication it would appear that the city of Melbourne is about to lay special paths or tracks in the streets for the use of bicycle riders, thereby proving themselves far in advance of this country in the proper management of that important question. The letter requests the Commissioners to favor the writer "with particulars of any special provision which has been made in the public streets for carrying bicycle traffic, such as specially prepared stripes or tracks."—*Washington Post*.

* * *

On the subject of small parks in New York City, Mr. William E. Curtis writes in the *Chicago Record* as follows: "Wherever a small park has been established the police authorities report a decrease of vice and poverty. The captain of the 12th precinct, in a recent report to the commissioners of police, said: 'The Hook gang is gone. It has disappeared since the establishment of the Corlear's Hook park.' The Hook gang was one of the most desperate and dangerous organizations of thieves and thugs in the city. The captain of the 6th precinct reports: 'The establishment of Mulberry Bend park is one of the greatest blessings that could be bestowed upon the people of this precinct.' Wherever a playground has been established similar reports are made. The troublesome boys do not move away, but they have found something better to do than smashing lamps and quarreling. They have a place where their surplus animal spirits can be expended without interfering with the rights and comforts of others. Their energies have found a safe and beautiful outlet. The health officers report a decided reduction in the rate of mortality wherever parks have been established."

* * *

Speaking of the work constantly going on at the Arnold Arboretum, Cambridge, Mass., a writer in the *New England Florist* says: "Already preparations are being made for the planting of another year. Ploughing has begun on strips for belt planting, where it is expected that willows and poplars of every species in the world will be coaxed into contentment. The work of constructing roads through the land which has recently been purchased by the Arboretum is also progressing rapidly, and it is probable that the road on the west side will be finished this fall. Even so early as this, the Arboretum is beginning to assume its wealth of autumn beauty. The path leading up the hill from South street near the lilacs is fairly ablaze with the gorgeous colors of the fruit of the viburnum. Ten species of this may be seen ranging in hues from red to deepest blue, now the palest yellow or green and again flushing into a vivid scarlet. The cornus, too, is in all its splendid fruitage and in the order of the shrubbery, the hydrangea paniculata and its varieties, both double and single, are a mass of pinkish white bloom. Here, too, flourish the cotoneasters, the fruit of which has also taken on those colors of the waning season, purple and scarlet."

CEMETERY NOTES

The Evergreen Cemetery Association of Stoughton, Mass., will advance the amount of trust deposit for the perpetual care of lots, after November 1st. from \$35, the present price, to \$50.

* * *

A fund of \$1,000 is being raised at West Corinth, Vt., the interest of which is to be devoted to the care of the upper cemetery of that village.

* * *

The 57th. annual meeting of the Garden Cemetery Association, Chelsea, Mass., was held October 4th. The permanent fund of the cemetery now amounts to \$14,900.

* * *

By the will of the late Elizabeth F. Donnelly, St. Louis, Mo., \$1,000 is bequeathed to Calvary Cemetery Association of De Soto, Mo.

* * *

A fund of \$1,500 has been raised for the Missisquoi Valley Cemetery Association, North Sheldon, Vt. The interest on the money is to be used to keep the cemetery in repair.

* * *

An effort to organize a "Ladies' Cemetery Association" is being made at Wichita, Kan., for the purpose of putting Highland cemetery into better condition. This is known as the old cemetery.

* * *

A committee appointed by the Directors of Oak Dell cemetery, Westerly, R. I., to decide on the amount to be deposited by any one who wishes to create a fund for the perpetual care of a lot voted that \$2 a year would take care of a lot one rod square. There has never been any provision made at this cemetery for the perpetual care of any of the lots. The amount appears insufficient even for a small cemetery.

* * *

At the recent annual meeting of the Fort Edward and Sandy Hill Cemetery Association, New York, one of the trustees, whose name is withheld for the present, made the generous offer to build, immediately, at his own expense, 2,000 feet of iron fence similar in pattern to that on the front, one thousand feet along each of the two sides. The gift was accepted with gratitude and appreciation.

* * *

The building committee of Fairview cemetery, New Britain, Conn., recently opened bids for the erection of a much needed office building at the entrance to the cemetery. The plans call for a brick building 18 feet by 26 feet and one story high. There will be a reception room, an office, toilet rooms and a fireproof vault in the building. The contract calls for its completion by December 1st. and the cost will be in the neighborhood of \$2,000.

* * *

When William McAvoy, who was Surrogate of Hudson county, New Jersey, died several years ago his will provided that \$1,000 should be given to the trustees of the Holy Name cemetery in Westside avenue, Jersey City, on condition that they keep the McAvoy plot in the cemetery in good condition perpetually. Bishop Wigger would not permit the trustees to accept the money with the condition attached, and recently John Edelstein, one of the executors, applied to Judge Blair, in the Orphans' Court, for permission to deposit the \$1,000 in a savings bank, with the understanding that the interest will be used for beautifying the McAvoy burial plot. Permission was granted.

A city of Mexico exchange reports that a meeting of the committee appointed by General Clayton for the purpose of organizing an American Cemetery Association was held September 2nd. The committee practically decided in favor of the San Joaquin property as a site for the cemetery. It possesses many advantages on account of its fine location, its being walled in, well watered, etc., and the selection is certain to be generally approved. The meeting also agreed on a prospectus and plan of organization, to form the basis of subscriptions, for which a canvass is to begin immediately. The members of the committee present started the subscription with a total of \$9,400.

* * *

The Ballou cemetery corporation is putting the gravestone in the old Ballou cemetery near Ashton, R. I., into better order. The corporation was granted at the last meeting of the town council of Cumberland \$100 of the Ira B. Peck fund for this purpose. Ira B. Peck was a former resident of Woonsocket, R. I., and left the town of Cumberland \$1,000, the interest whereof is to be spent in caring for the grave stones of cemeteries in the town of Cumberland, of which the old Ballou is one. The money is not to be spent in caring for the grounds, only the grave stone being mentioned in the will. Mr. Peck further provided that if certain of his heirs did not personally care for the Peck family lot and see that it was kept in good condition the property would revert to the Woonsocket hospital.

* * *

George T. Tilden, architect, Boston, has submitted to the building committee, plans and specifications for the new building which the Exeter, N. H., Cemetery Association voted to erect at the last annual meeting. They call for a structure of brick, with ornamental trimmings, 27 feet long and 36 feet wide. A central partition will divide the interior into halves, each of which has an entrance and communication one with the other. The right half will be fitted out as a chapel and the left as a receiving tomb. Both apartments will be sheathed in North Carolina pine, the ceiling of the chapel having a moulded cornice. This room will have a hardwood floor, while the tomb will be floored in concrete. The cost of the structure will be about \$2,500.

* * *

The Furber Memorial Chapel, erected in Forest Glade cemetery, Somersworth, N. H., to the memory of the late Hon James T. Furber and his deceased wife by their daughter, Mrs. John R. Poor of Lawrence, was dedicated early this month with simple but appropriate exercises. This event took place on the 46th anniversary of the dedication of the cemetery. It stands on a spacious lot of nearly circular form, and is constructed of Lawrence seam-faced granite, with Vermont granite trimmings. The building is $22\frac{1}{2}' \times 32\frac{1}{2}'$. The interior finishing is cypress, with polished surfaces. The walls are frescoed in warm tints. The stained glass window over the altar has an Easter lily design for its center piece. The pulpit set and the mourners' seats are of heavy quartered oak. There is seating capacity for 70 persons. The building cost \$10,000. Over the arched entrance is the inscription: "I am the resurrection and the life." Under the gothic window at the end of the building, on the left of the entrance, is set a bronze memorial tablet, inscribed as follows: "Furber Memorial Chapel. The gift of Lizzie Jane Poor, to the Forest Glade Cemetery, in Loving Memory of her Father and Mother, James Thomas Furber, died January 27, 1892. Jane Roberts Furber, died February 12, 1863. Erected A. D. 1897." Mr. Furber, who was for many years general manager of the Boston & Maine railroad, was a lifelong resident of Somersworth, and was the town's benefactor in many ways.

CORRESPONDENCE.

Elodea Canadensis.

In a communication from Mr. Reinhard Schuetze, Landscape architect, Park Department of Denver, Colo., he says: "In the lakes of our parks we are greatly annoyed with the so-called moss, *Elodea Canadensis*, and all methods to get rid of it have proved to be more or less unsatisfactory. We would therefore be greatly pleased if we could get some information on the subject through the columns of PARK AND CEMETERY."

In relation to the subject the following has been received: "In reference to *Elodea Canadensis* I must say that nothing but pulling it out can be done. I am bothered with it too when the ponds or lakes are shallow, and employ a man to pull it out with an iron rake. It got into our new lily pond, but one thorough cleaning kept them in good shape. For pulling out weeds in the lakes, of the usual varieties, I use a piece of 4" X 4" with 16" iron bolts running through it in opposite directions. This I dump from a boat and have either a man or horse to pull it in. It does the work well but is rather ruinous to the shores. I am trying to get up something new for next season."—James Jensen, Chicago.

* * *

We are also annoyed with the "*Elodea Canadensis*" and have tried different remedies without any satisfactory results. I have recently however discovered that swans are very fond of it, and by confining them to the lake where the water moss prevailed they did much towards keeping it down, and we hope to control its development in this way. German carp will also eat it, but I prefer the moss to the carp. I have also spread iron shavings and filings on the bottom and sides of our reservoir, which for a few years prevented its growth, but it came again as thick and fast as before, in fact it seemed to adapt itself to the iron, and finally thrived better than ever. I have great hopes that the swans will do much towards keeping our lakes comparatively free from objectionable weeds, and they do not injure either the *Lotus* or the *Nymphaea*.—Wm. Salway, Cincinnati, O.

* * *

The Trustees of Woodland Cemetery, Ironton, O., have recently passed resolutions embodying important reforms. These resolutions were framed to render certain rules of the cemetery of more effect:

Resolved, 1st. That hereafter no foot stones, and what are known as "cradles," will be permitted to be placed on any lot in the Cemetery.

2nd. That the superintendent is hereby directed to remove all foot stones on lots where the owners fail to keep same in good order, after 30 day's notice has been given the owner that said stones are not in good order and condition.

3rd. The superintendent is hereby directed to use his best efforts to induce lot owners to remove all foot stones and "cradles" now in use in the Cemetery.

4th. That no shrubbery known as "Irish Junipers" will hereafter be allowed to be set out on any lot in the Cemetery, and the superintendent is hereby directed to remove all such "Irish Junipers" as have become unsightly.

5th. That hereafter no mounding of graves will be permitted.

The commissioners of the District of Columbia, in accordance with the recommendations of the superintendent of parks have directed that no one hereafter shall plant trees in the street parks of Washington without a permit. This order will limit the planting of trees to such kinds as may be desirable.

LEGAL.

GENERAL RULES OF LAW AS TO BURIAL BEING FINAL AND REMAINS NOT REMOVABLE BY OWNERS OF CEMETERY LOTS.

A good deal of valuable legal information is contained in the decision which the supreme court of Rhode Island handed down July 19, 1898, in the case of Gardner against the Swan Point Cemetery.

The supreme court says, citing authorities for its statements, that while a burial lot is regarded as property, in which title may in most cases descend to heirs, it is evident that the title generally is not like that of ordinary real estate. Thus, in cases of churchyards and cemeteries it has been held that, though a deed may run to a grantee, his heirs and assigns, he takes only an easement or right of burial, rather than an absolute title. So long as the land is used for burial purposes, he cannot exercise the same rights of ownership as in other real estate. For example, it has been held that a burial lot could not be mortgaged; and held that it did not fall within a power of sale given by an executor of a will for the payment of debts and legacies, but that it passed to the heir at law of the testator, in line with which it has also been held that it would not pass under what is termed a residuary gift, in a will, but would descend to the heirs as intestate property.

In one case, citing an ancient authority, it was held that those who erect gravestones may maintain an action for any injury done to them during their time, but after their decease the action belongs to the heirs of him to whose honor or memory the stones were erected. In another case the right of the heir was sustained as against a widow who had removed the body of her husband from the family burial lot. In a third instance it was held that the heirs of a decedent at whose grave a monument has been erected can recover damages from one who wrongfully injures or removes it, or, by an injunction, may restrain one who, without right, threatens to injure or remove it, and this though the title to the ground wherein the grave is be not in the plaintiff, but in another.

The principle of all the cases seems to be, continues the court, that the buried body shall remain undisturbed, and that the right and duty falls to the next of kin to see that its repose is duly protected. This right "after burial" has been referred to as one distinguished from the right of custody and disposal of the body at the time of burial, when other considerations than kinship may often arise. This distinction was noted in Fox v. Gordon, 16 Phila. 185, for one case, which has a full and instructive opinion on the subject, wherein it was held that even a husband and father had not the right to remove the bodies of his wife and child from the wife's family lot in which they had been buried with his consent. Contrariwise, it has been held that the widow was entitled to the custody and control of the body of her husband, after a burial against her protest, and under threats and fear of a disgraceful scene.

Thus, it appears that a burial by the consent of those most nearly interested is regarded in law as a final sepulture, which cannot be disturbed, against the will of those who have the right to object (generally the next of kin), on account of change in feeling or circumstances. That there may not be possible exceptions to this rule, the court particularly states that it does not say, since it is more a rule of ethics than of law, but it thinks that it is safe to say that in law it is recognized as the general rule.

In view of the foregoing, the court further holds, as a point particularly involved in this case, that, the second wife of the former owner of a cemetery lot having been given the residue of his estate, by will, and she having deeded the lot to the cemetery corporation, in trust, "for a place for the interment for me, the grantor, and for me only, in addition to those already buried therein," neither she nor the corporation had authority to remove the body of a stepson of hers, even that she might be buried by the side of her husband, against wishes of next of kin of the stepson.

Selected Notes and Extracts.

Ground Bones.

Estimating the value of whole bones at \$10 per ton and cost of grinding them at \$10 more, will make a cost of one ton of ground bones \$20.

Suppose an average ton of bones to contain 60 lbs. of organic nitrogen and 400 lbs. of phosphoric acid, 375 lbs. of nitrate of soda will furnish 60 lbs. of nitrogen and 135 lbs. of soda.

1350 lbs. of powdered phosphate of lime 30 per cent. will furnish 405 lbs. of phosphoric acid, and this mixture will cost, with nitrate of soda at 2½ cents a lb. and powdered phosphate of lime at 34 cents a pound, \$17.25 for only 1725 lbs. equal in nitrogen and phosphoric acid to 1 ton ground bones. The nitrogen in nitrate of soda is in its most available form; there is also 135 lbs. of soda which is not to be had in using bones alone.

The phosphoric acid in the powdered phosphate of lime is more available than the phosphoric acid in ground bones, because the powdered phosphate of lime is in a much finer state of division than ground bones and fineness of division is the measure of its availability. The 135 lbs. of soda are equivalent in alkaline action to 202 lbs. of potash.

Prof. Wagner says in regard to the effect of soda: "There is a direct effect of it, and in this direct effect of soda, that is to say, of soda entered into the plant has proved during my investigations of such importance that further researches in that direction are of very great moment." In his opinion "the decided preference expressed by Schultz-Lupitz for Kainit as a potash (Kali) salt is, like the better yield produced by the use of nitrate of soda as against sulphate of ammonia, attributable to the effect of the soda which Kainit, as well as nitrate of soda contains, and which heretofore has not been properly valued."

Andrew H. Ward.

Transplanting Beech Trees.—An Ever-green Screen.

The writer met with many beech trees, during the past summer, showing bad effects of transplanting. They were all moved in the spring in good time and under favorable circumstances, and ranged from small plants, four or five feet in height, to immense, fine specimens, the branches covering a diameter of perhaps fifteen feet. It was clearly evident that the pruning-knives had been insufficiently used. With great care and attention, many plants may be moved without much pruning, but not so with the beech. Experience with this plant leads many to cut

the branches into almost a pole. As a rule, beeches have an abundance of branches, and it would doubtless be better to prune out all of the weaker ones, and shorten in the others about one-half. The same end will thus be gained, while leaving the trees with better appearance and without the necessity of sending out buds from old wood—a difficult thing for almost any tree.

A correspondent asks what would be a good screen to place before a neighbor's barn and subject to a northwest exposure. To obtain the desired result most quickly, nothing can excel the Norway Spruce. Should a thick screen be desired, it must be watched, and pruned judiciously if a rank growth commences. It is hardy and scarcely shows the effect of a severe winter in the loss of a few leaves at the tips of branches. Where the area permits, and at least two trees are used in the screen proper, a tasty arrangement could be made by putting some of the rarer evergreens in front of the spruce to form a group. The spruce would form an admirable background for such colored retinisporas as *squarrosa* and *plumosa aurea* and at the same time be a protection to them from the winds.—*Meehan's Monthly* for October.

Flower Vases in Cemeteries.

Unfilled vases are unsightly on cemetery lots during the summer season, and doubly so at other seasons when turned bottom up as is done in some cemeteries to prevent damage from freezing. In some cemeteries the rules prescribe a certain date in the early summer for filling, and their removal from the lot, if this is not done in due course. In the latter case they are properly marked and placed in storage. This involves expense in handling and properly storing, but it insures the keeping of the cemetery grounds more in harmony with the principles of landscape gardening.

Bracken in the Shrubberies.

In places where the wild Bracken grows freely a very pretty effect is secured by allowing it to grow up among Rhododendrons and other shrubs. At this time of year, after the flowers are over, it lights up the trees, and has a wonderfully pretty appearance. By far the prettiest bit of garden scenery I have seen lately was at Rougham Hall, Bury St. Edmunds. In an open part of the shrubbery, where grass walks have been laid and wide borders formed, a large corner has been planted with *Lilium longiflorum*, and the thousands of flowers now open, backed by the green of the Rhododendron and Fern, are really beautiful. Seen on one of the hottest days of August, the cool refreshing

green and the pure white Lily flowers were a sight not easily forgotten, and though of course, both Rhododendrons and Bracken grow here like weeds, which they will not do in some places, it is worth trying to get such a lovely picture. In open positions and in some soils the Bracken takes on lovely autumn tints, and for this effect alone in the landscape it would be worth preserving or even planting where it does not grow naturally.—*The Garden, London.*

The following is given by O. J. Farmer in the *Minnesota Horticulturist* as a destroyer of squash insect pests: "Dissolve one-fourth pound of saltpeter in water. Make a small ditch about the hills of cucumbers, squashes or pumpkins while the vines are small and pour in this solution of saltpeter. It will keep off striped squash bugs and kill the squash or flatiron bug which eats the vines." We have noticed that these bugs will turn their attention with disastrous effects to the clematis when squash vines give out.

The stomachs of 109 yellow billed and 46 black-billed cuckoos, obtained in twenty states, the District of Columbia and Canada, were examined at the Department of Agriculture. The examination showed that cuckoos do at times eat fruit, but that it is not their usual habit. The insect food of cuckoos consists of beetles, grasshoppers, cicadas, bugs, wasps, flies, caterpillars and spiders, of which grasshoppers and caterpillars constitute more than three fourths. The great majority of the insects found in the stomachs were harmful kinds. Nearly half of the cuckoo's food was found to be caterpillars. In the cuckoos we probably have one of nature's most efficient checks on the increase of these harmful species.—*New England Farmer.*

Grafting Moutan Paeonies should be attended to about this time. For stocks use any of the thick rooted Chinese varieties, those with undesirable flowers should of course, be selected. Dig up the plants and cut off the thick roots in lengths as desired—short pieces if wanted to go in pots, but if to be heeled in after grafting they may remain quite large. In selecting varieties it should be borne in mind that among Moutan paeonies names are very common and varieties few. The cion should be tied on with material which will not rot during winter. In selecting the cions take those in which there are no flower buds as they "take" quicker. When the necessary number has been worked heel them in a frame and keep close for a time, or in a sheltered place outside with a mulch of moss or leaves according to locality.—*The Florist's Exchange.*

PARK AND CEMETERY.

Association of American Cemetery Superintendents.

ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., President.
WM. STONE, "Pine Grove," Lynn, Mass., Vice President.
F. EURICH, Woodward Lawn, Detroit, Mich.
Secretary and Treasurer.

The Thirteenth Annual Convention will be held at New Haven, Conn.

The American Park and Out-Door Art Association.

CHARLES M. LORING, Minneapolis, Minn.
President.
WARREN H. MANNING, Tremont Building, Boston, Mass.
Secretary.
E. B. HASKELL, Boston, Treasurer.

The next meeting of the Association will be held at Detroit, Mich.

Publishers' Department

Park Commissioners and Cemetery Trustees are requested to send us copies of their reports.

Photographs and descriptive sketches of interesting features in parks and cemeteries are solicited from our readers.

The South Bend, Ind., Cemetery Question.

Mr. Schuyler Colfax, Mayor of South Bend, Ind., sends us the following in relation to the cemetery question of that city, which is a live and yet open one; and which invites investigation with a view to business: "The cemetery now owned and operated by this municipality is almost full, and there is no possibility of extending it in territory to last but a very few years longer. We have several very beautiful spots that could be made into beautiful cemeteries, and if a corporation could be interested in this, it ought to be a source of gratification to our citizens, and a source of good revenue to those owning the property. I would think that it would require 60 acres to commence with, and at least 60 acres retained under an option. The citizens of this city agitated the formation of a local company at one time, but there was a sentiment against making money out of the burying of the dead. I presume some stock could be subscribed here amongst our citizens, and I am quite sure that the Street Car Company would be very glad to extend their lines at once, were this place bought and improved. It might be well to state that this town contains, without doubt, 35,000 people, and that the Street Car Company now putting down an entirely new system, and connecting us with Elkhart, Goshen and Mishawaka, Ind., seem to be inclined to do all that is necessary to improve the transportation facilities of the city, and to extend their lines anywhere that it is necessary or desirable."

John Ahrens has been appointed superintendent of city parks, Sedalia, Mo. There were a number of candidates for the office.

Citizens of Ellisburg, Jefferson Co. N. Y., interested in cemetery improvements have incorporated as the Ellisburg Cemetery Association with A. S. Thompson as President, and G. S. Hudson, Secretary and Superintendent. The older por-

tion of the cemetery dates back to the first settlement of the country, but additional lands have been secured which will be laid out in accordance with designs prepared by Frank H. Nutter, landscape architect, Minneapolis, Minn.

At the annual meeting for the election of officers of the Massachusetts Horticultural Society, which occurred October 1, last, the following were elected: President, Francis H. Appleton, re-elected; Vice-presidents, Chas. H. B. Birck, Walter Hunnewell, Benjamin Ware and Samuel Hartnell; secretary, Robert Manning, Benjamin M. Watson, professor of botany and vegetable physiology and Samuel H. Scudder, professor of entomology.

The California University Competition.

According to a cable dispatch the first of the competitions for the Phebe Hearst Architectural Plan, for the University of California has resulted in the selection of eleven designs, the authors of which are to take part in the final competition. Six were American, one Austrian, one Swiss and three French. The American competitors were: Whitney Warren, J. H. Freedlander, Howard & Cauldwell, Howell, Stokes & Hornbostel, and Lord, Hewlett & Hull of New York City; and Desgradielle & Codman of Boston. The award commissioners were: Mr. J. L. Pascal, chairman, France; Paul Wallot, Germany R. Norman Shaw, England and Walter Cook, United States. The University of California was represented by its regent Mr. J. B. Reinstein.

Canadian Horticultural Society.

The first annual convention of the Canadian Horticultural Society was held in Toronto, September 7-8. Papers were read on "The Rose," "Dutch Bulbs," "How to Make a Flower Show Pay," "Carnations," "What is the Most Economical Fuel," etc. Prof. Fletcher of Ottawa, delivered a lecture upon "The Diseases of Plants." The City of Ottawa was chosen for the next annual meeting to be held in August, 1899. The following officers were elected: Wm. Gammie, London, President; 1st. Vice-president, C. Serim, Ottawa; 2nd. Vice president, P. McKenna; Secretary, A. H. Ewing, Montreal; Treasurer, Jno. H. Dunlop, Toronto.

The United States Department of Agriculture has received through the Department of State, a communication from Count Cassini, Russian Ambassador, stating that the Imperial Russian Horticultural Society will hold an International Horticultural Exposition at St. Petersburg, in May, 1899. The United States is invited to take part in the Exposition by sending exhibits and special commissioners to prepare the American section. Exhibits of foreign exhibitors duly accredited, will not be subject to custom inspection at the Russian frontier. Privy Counsellor Fischer von Waldheim, Director of the Imperial Botanical Garden at St. Petersburg, has charge of the foreign sections of the Exposition with the functions of president, and all inquiries relative to the Exposition should be addressed to him.

In the city library of Kansas City is a collection of geological specimens made by Mr. Sidney J. Hare, Superintendent of

Forest Hill cemetery of that city. In this collection is what the Kansas City *Journal* describes as the oldest book in the city, consisting of four stone slabs bound together by a strip of canvas, and resembling a book in form. On the slabs can be seen the imprints of rain and the feet of some animal resembling a bird and of monsters, made there centuries ago. The following is the description by the curator: "Some raindrops fell upon the first page and left their mark upon it. The birds alighted on the second leaf and left the prints of their tiny feet. A primeval monster—a cat after the bird—marred the smoothness of the third page with the impression of his huge claws. And a gust of wind came along, turned the fourth page over and closed the book. The name of the book is 'Footprints on the Sands of Time,' and it was written by the great Author of the Universe."

Who knows where the graveyard is
Where the fox and the eagle lie?
Who has seen the obsequies
Of the red deer where they die?

The common forest brown
Covers them over with Quaker grace
Just where they laid them down.

If you see in summer a deeper green
Here and there it is like to be
The spot where their bones have been.

—William Herbert Carruth

RECEIVED.

Courtesy of Mr. Frank H. Nutter: Report, Minnesota Surveyors' and Engineers Annual Conventions. 1897, 1898.

By laws and Rules and Regulations of Oak Grove Cemetery, Delaware, O.

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PARK AND CEMETERY.

Devoted to Art Out-of-Doors,—Parks, Cemeteries, Town and Village Improvements.

R. J. HAIGHT, Publisher,
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R. J. HAIGHT,
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CONTENTS.

EDITORIAL—TELLING MEMORIALS—IDEAL SURROUNDINGS—THE NURSERY PLOT—EARTH BURIAL—ART COMMISSIONS.....	161-162
BEAUTIFUL FALL FOLIAGE.....	163
THE CHRYSANTHEMUMS IN CHICAGO.....	164
*RIVERSIDE CEMETERY, ROCHESTER, N. Y.....	166
*KENNEY PARK, HARTFORD, CONN.....	168
*NATIONAL CEMETERY, ARLINGTON, VT.....	170
SPECIMEN TREES AND SHRUBS.....	172
*ROYAL BOTANIC GARDENS, KEW, ENGLAND, VII.....	174
TREE PLANTING ON PUBLIC STREETS.....	176
*CLEMATIS PANICULATA—A CALADIUM BLOSSOM—VINCA MAJOR.....	178
*GARDEN PLANTS—THEIR GEOGRAPHY, XXX V.....	179
EARLY FLOWERING BULBOUS AND TUBEROUS PLANTS	182
CREMATION	183
PARK NOTES..	184
CEMETERY NOTES.....	185
CORRESPONDENCE.....	186
SELECTED NOTES AND EXTRACTS.....	187
PUBLISHER'S DEPARTMENT.....	188

*Illustrated.

SPEAKING of memorials that serve two great purposes at one and the same time, the gift to the Boston Public Library of a splendid collection of books on Landscape Gardening, presented by Mr. and Mrs. James M. Codman, of Boston, in memory of their sons Henry Sargent, and Philip Codman, landscape architects, deserves notice. The deaths of these men in the prime of promising careers were widely lamented, and to preserve their memories in a public manner in connection with their work, and at the same time benefit their fellow man in a marked degree, the sorrowing parents have made this valuable gift to the public library. It has been given the name of the Codman collection, and comprises a large number of works in many languages on landscape gardening and allied topics, and some few on other subjects.

SOMETIMES we dream of ideal surroundings, the home lot planted in such a manner as to inspire a sense of rest and comfort of enduring degree, and of such a quality that it presents a new picture at every change of light or season. We

awake to note that the ideal is far from apparent, and yet the opportunities are awaiting our activities on every hand. There is, though, much to do on all sides to make things ready for the final touches required to complete the picture. It is, however, gratifying to realize that there is a widespread awakening looking to improvement in the external conditions of our dwelling places. Improvement societies are springing up broadcast, charged with some specific object or another, and sometimes with many, to clean, restore, improve and make better existing conditions which being improved shall redound a hundred-fold to the attainment of better and more pleasurable living. Most of this work, present and prospective, is not immediately connected with the home lot, and yet should be accomplished in the general interest, and then when trees are planted, roads and alleys cleaned, garbage taken care of, unsightly objects removed and repairs made to secure a pleasant outlook, let our Improvement Societies take a hand in helping to improve the home lots of the community. It has been found that prejudice against interference by neighbors or neighborly associations is easy of removal when the object of that interference is known to be that of kindly interest, giving promise of worthy results.

A very small percentage of property owners have any practical knowledge of how to plant their home grounds, be their extent great or small,—a stroll through the residence streets of any community will verify this. Here then is a suggestion to the Village Improvement Society, to institute a campaign: of invitation to its citizens to join in the effort to improve the home grounds; of instruction to give advice and assistance to produce satisfactory results; and of solid help to secure the improvements where the means are inadequate to engage in such work. This is the age of mutual help and broad benevolent effort, and in the line suggested would tend to create one of the most beneficent reforms of the day—ideal surroundings for the home.

THHERE is no question nowadays as to the advisability of establishing a nursery plot in cemeteries of any area or importance. Park authorities everywhere have early recognized the necessity of such an adjunct to their grounds, the work of maintenance and progressive improvement would actually be hampered by the lack of so important a feature of management. In a degree the same broad statement will apply to the cemetery.

To whatever extent a cemetery is carried on under modern ideas of lawn plan, ornamental planting and landscape embellishment, just so much will a nursery be an actual advantage in its improvement. The fact of being able to propagate an abundance of material, or to test new varieties as to their adaptability to soil and climate, while most important and eminently desirable possibilities, they do not equal the fact that the nursery provides a means of so growing the planting material, that a successful growth after transplanting into final location is from practical experience almost an assured fact. All gardeners realize the value of this point. The nursery affords such opportunities for successive transplanting, and ultimate selection of the very best by comparison in the rows, that its benefits are soon realized in the appearance of the new plantings in the grounds, and ultimately in the fine constitutions and thriftiness of the shrubs and trees that have had the benefit of such treatment. True economy and good management demand that due consideration be given to this question, and it is an acknowledged fact that wherever such nurseries have been established in our cemeteries, they have been found to contribute very largely, not only to the increased attractiveness of the grounds but to harmonious and consistent treatment in the whole landscape scheme. The nursery helps to obliterate chance effects and to introduce the certainty of being able to work to any desired results contemplated by the general plan.

PERIODICALLY there appears in the public press discussions pro and con on the subject of earth burial, its merits and demerits; and this has probably been a fruitful subject for difference of opinion since this method of disposing of human remains supplanted other methods. That the soil is a most wonderfully active reagent in the reduction of organic matter to its component elements everybody has had more or less opportunity of practically demonstrating, and on this the great medical authorities are a unit. But, unfortunately, in reading the opinions of the medical authorities there seems to be certainly two sides to the question as regards the cemetery in its relation to public health. There is this to be said however that conditions of soil, as to quality, location and distribution, vary so much that an opinion, correct for one situation may be more or less incorrect for another, and the mechanical energy of the soil in its work of absorption and reduction, also varying according to the composition of the soil, also accounts for much divergence of opinion. A decided sentiment is gradually taking root, however, against the use of such heavy and time-defying caskets as are now

employed for the burial of the dead and lighter material and even wicker-work coffins are being openly advocated. It has perhaps been well said, that there is far more danger to public health in the oftentimes necessary opening of graves wherein the earth has not been permitted to do its work, than in the case where absorption and purification by nature's methods have had free scope. To those favoring earth burial the prejudice against early contact of the revered remains with mother earth, is but a temporary one. A little calm thought and reasoning unseats it. Sooner or later, prejudice or no prejudice, nature finally disposes of the soulless body and frequently circumstances arise to compel the wish that nature had been left to her own methods. Whatever the means of disposition of our lifeless forms, absolute diffusion by natures' chemistry is the final result, and the retarding of her processes by human ingenuity, in the way of metal cases, sealed caskets, concrete and brick graves, or costly mausoleums, the result is the same. Dust we are and to dust we must return, is the unchangeable law.

THE functions of art commissions or committees in our large cities, appointed to decide upon the merits of proposed public art, its location, appropriateness, etc., thus far appears to be little understood by the appointive power, if we may judge from the average personnel of existing commissions, or some of the results of their work. That such commissions are necessary is an accepted fact, and is a matter insistently urged by this journal. But it was expected that, when it was recognized that a commission qualified to make decisions on questions of public art was a necessity in our art growth, those in whose hands the appointments lay would themselves be qualified to make such appointments. This, it may safely be said, has not been realized in a proper degree. In such commissions the great question to be decided is the paramount one of art, no matter in what relation, art is the governing principle. And a due and proper consideration of the art principle, as it relates not only to the present and its immediate object, but to all time, demands broad-minded, highly gifted artists as the backbone of a commission, fortified by laymen of recognized qualifications. On the subject of the proposed Lafayette monument to be presented to Paris, the names published as a committee to select a design should not receive public confidence for so important an undertaking, unless it is definitely known that great artists are to be consulted. American art cannot afford to be submitted to such risks of foreign ridicule as these preliminary movements suggest as possible.

BEAUTIFUL FALL FOLIAGE.

At this season of the year, late autumn, our woods and groves present a beautiful picture. Certainly, spring and fall are the most pleasing seasons of the year. In the spring the budding leaves and opening flowers, coming after the cold of winter, inspire us with hope for the coming year, and we are at that time prone to think no other period of the year so full of pleasure. Beautiful as are the woods in spring, and the well planted lawns of the wealthy, as a picture of varied colors the woods of autumn are far preferable. And we not only have our native trees and shrubs; there are also those of Japan, many of which are of as brilliant colors as our own. In the way of maples, for instance, we have of the native sorts the red and the sugar, and from Japan the many forms of polymorphum and the rufinervum. The native ones referred to are so well known that it is not needful to describe them. But of the Japanese ones I would wish to say a few words. The polymorphum and varieties are famed for pretty and for colored foliage at all times when in leaf, but it is not well known that in the fall there is added a most brilliant red color to the polymorphum itself and to the variety atropurpureum, the latter being the now common Japanese blood-leaved maple. This occurs about two weeks before the leaves fall. Rufinervum is the counterpart of our native striped maple, excepting that it colors beautifully in the fall, which the striped maple does not.

Of our two gums, the sweet and the sour, I prefer the sweet. The sour gum with us is a transient affair, the leaves coloring today, and falling a few days later. On the other hand, the sweet gum changes color gradually, and the leaves hold on a good while, and when growing in a damp place, which it prefers to do, the bronze yellow of its foliage is most pleasing.

The sorrel tree, *Oxydendron arboreum*, a native, is a tree with leaves much like the sour gum, and coloring much the same. The fall foliage is very lasting, displaying its brilliant color for weeks.

Much has been written of sumachs, and their beauty at this time, and well they deserve it. What a display the tall one, *Rhus typhina* makes. Then there are glabra and its variety laciniata. But has enough been said of the value of aromatic and copallina? Aromatic has not the stiff growth of most sumachs. Its branches are somewhat slender, and its growth partly spreading. It takes on the "Sumach" color to perfection, later in the season than some others. Copallina is pretty the whole season through. Its dwarf growth, lovely, shining green foliage, bright scarlet heads of seeds, and lastly, deep red

foliage in fall, comprise more good qualities than are given to most plants.

Our common dogwood, *Cornus florida*, needs no eulogium, its worth is too well known, but I do not think that it is known that the red flowered one has darker colored foliage in the fall than the other. But it has. A rich, dark red, it may be termed. There is a tint of red in the leaves all the season through, and this lasts till they fall.

Oaks change color with us rather later than many other trees. There are, really, but three of the common ones of much value for bright colors, the scarlet, the red and the pin. The scarlet, the best of all, is the last of all to change from green to scarlet. I cannot explain why it is that small seedlings of many other oaks take on brilliant fall colors, which they do not when of larger size. The macrocarpa, *Prinus*, *Phellos*, *castanea* and *imbricaria*, are lovely during the first few years of their seedling life, but after they pass three to four feet in height, there is no more bright coloring.

There is hardly a tree that is not beautiful in the autumn. Hardly one changes directly as the others do. The Tulip Tree, sassafras, hickories and many others all vary. The practical and artistic planter will study the peculiar changes of each, to form a picture to be admired in the fall. Just the same differences exist in shrubs. The very common golden bell becomes almost black, so does the privet, the *Mahonia aquifolia*, and many of the semi-evergreen roses.

Among bright colored shrubs, but few equal the tall huckleberry, *Vaccinium corymbosum*. Its leaves become of an intense scarlet. Nearly all *Vacciniums* are lovely in the same way, but not to such a degree, and so are *Andromedas*. There are several *Viburnums* to be allowed on the list, notably *rotundifolium*, *prunifolium*, and *Lentago*--all good.

Berberis Thunbergii is good, but it needs a mass of it to make a good display, its leaves are so small.

Itea Virginica, *Pyrus sinensis*, *Ribes aureum*, and *Spiraea prunifolia* are a few of many kinds which by their pretty foliage add to the charm of the autumn.

Joseph Meehan.

The Commissioners of Lincoln Park, Chicago, propose to expend some \$400,000 the coming year in renovations and improvements. The walks need much work, the lawns have been a heavy expense to keep in condition, and the sea wall has been partially destroyed by recent lake storms. It is the intention, if funds are provided as expected, to make permanent repairs, and put the park into finer condition than it ever was before, and more worthy of the great metropolis of the west.

THE CHRYSANTHEMUM IN CHICAGO.

The Eighth Annual Chrysanthemum show of the Chicago Horticultural Society, held November 8-12, in the Keith Building, in which it occupied the ground and first floor above, was in point of ex-



CHRYSANTHEMUMS IN DOUGLAS PARK.

cellence on general principles an advance on previous years. The floral display as a whole was placed in a better setting, the decorations of the floors were more profuse and harmonious. These decorations were largely composed of oak branches and smilax, which with the brilliant electric lighting in the evenings made an attractive exhibition. The large floor spaces, 125 by 175 feet, allowed admirable opportunities for laying out the exhibits as well as liberal passageways for visitors.

The lateness of the Chrysanthemum season this year was possibly the main cause for the somewhat smaller show of the queen of autumn than usual, but this was largely compensated for by the number of specimens of the bush and standard varieties, which excelled the display of former years. Nevertheless there were some marvelously fine specimens of single stem flowers of the standard sorts, and some promising seedlings. There was also a goodly exhibit of geraniums.

Violets, carnations and roses had their days and drew their special admirers, and the lovers of flowers generally had opportunities of satisfying the longings that possess them of revelling in these most beautiful manifestations of nature's handiwork.

There were likewise some fine exhibits by gardeners of some of Chicago's wealthy citizens, and an excellent display of foliage plants, ferns, etc., from the Lincoln Park conservatories. Nor were orchids altogether neglected for a part of the collection of Mr. Uihlein, vice-president of the society, was set amid rock work and built up supports, to-

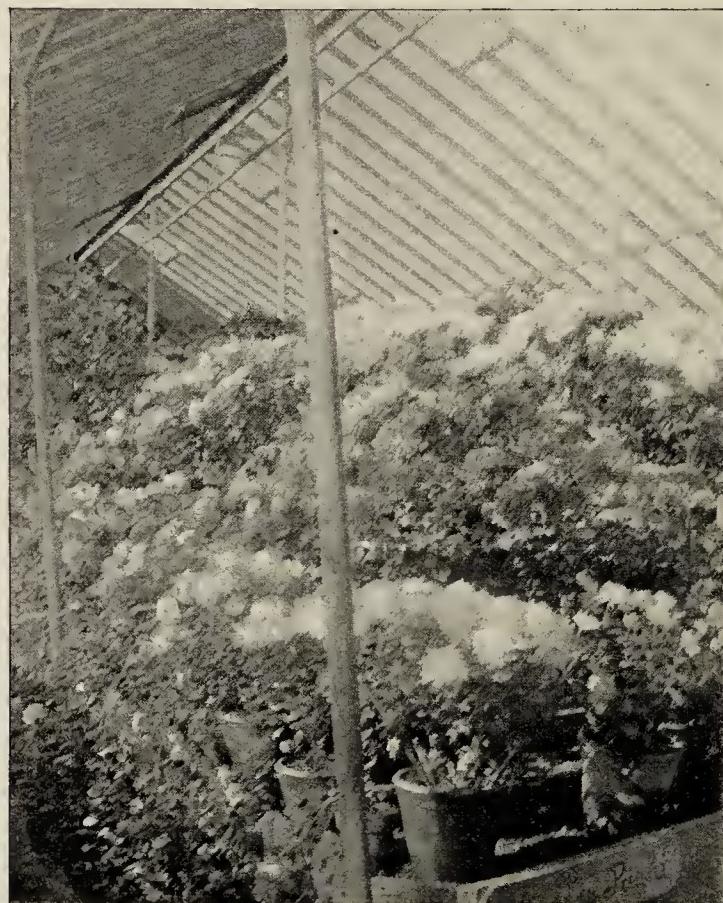
gether with a pool of water to enhance the effect.

One of the curiosities of the flower show was that of orchid flowers frozen in blocks of ice. The form of the flower and its coloring were beautifully preserved. The arrangement and care of the exhibition was in the hands of Mr. W. N. Rudd, as in previous years.

* * *

But it is not alone at the annual Chrysanthemum Show that this flower rules supreme, for of late years the leading parks of Chicago have maintained a display of choice varieties, which supplement the down town exhibition, and what is more to public advantage, continue it in fine condition quite a considerable time.

To explain to what an extent this floral display is carried in the several parks, there are presented herewith some views taken in the conservatories of Douglas, Humboldt, Lincoln and Washington Parks respectively. It has often been discussed in these columns the desirability of obtaining the utmost efficiency from the standpoint of public benefit, that can possibly be obtained in park development, and the value of the park conservatory not only from its pleasure-giving, but in a higher sense from its educational influence, can scarcely be over estimated.



CHRYSANTHEMUMS IN HUMBOLDT PARK.

The power of fascination possessed by flowers and its effects in developing the better impulses, is a telling principle in the welfare of communities, and

perhaps it is well to say especially so in regard to the young. And the parks have such excellent opportunities of ministering to this result. As a rule the propagation and preparation of plants for the conservatories are in the hands of experienced



CHRYSANTHEMUMS IN LINCOLN PARK.

men, from whom we may generally expect the best of results, so that the people have the opportunity of studying the flowers in the best of condition and development.

It would scarcely be reasonable to compare the flowers in the park displays with those at the periodical exhibitions; both the purposes and requirements are different. Yet it is safe to say that the main differences are in size of individual blooms, while on the other hand the arrangement of plants and massing of colors in the park conservatories produce vastly better results in the aesthetic sense.

* * *

The arrangement of the building in the Douglas Park conservatories admits of an admirable view of the chrysanthemums from the upper step of the flight leading down to the floor of the house. The mass of color was fine in its gradations and harmonies, and the varieties and condition of the plants were worthy features. One suggestion we would make to Mr. Chas. T. Zapel, the chief gardener, is that of more distinctly marking the named varieties. It is not labor thrown away by any means; and to the majority of people it creates more interest in the individual plants and greater appreciation of the whole. If any effort is made by the Douglas Park authorities to interest and attract the teachers and schoolchildren of the locality, a growing effort of the leading park officials of the country, the naming of the plants in a distinct manner is an absolute necessity. Douglas Park has a unique collection of tropical plants, many of them of

recent importation, and all intensely interesting.

* * *

The view of the Chrysanthemum house in Humboldt Park, speaks for itself. Perhaps not so large in number of varieties, but arranged carefully and with regard to the merits of the flowers, the display is an excellent one. Passing through the chrysanthemum house Mr. Jensen, the superintendent of the park introduced us to his fernery which although a work of only two years, is a revelation of refreshing beauty, and well worthy future special record.

* * *

Lincoln Park, has always been noted for certain features of its gardening, and since the erection of its commodious conservatory, this building has been one of particular interest. Here the display of chrysanthemums is perhaps larger than in either of the other Chicago parks, and especially noteworthy is the fact that the side beds were composed chiefly of the pompon varieties. This class is coming to be more popular and deservedly so. The large centre bed was a rich show of the finest sorts, relieved by other plants. Mr. Strombach, the chief gardener, sent a large collection of plants to the Horticultural Society's show, as before mentioned.

* * *

The new conservatory of Washington Park is admirably adapted to floral displays and as will be seen by the illustration the chrysanthemum was not overlooked. The banks of grand flowers on either hand of the central path were masses of beauty, containing the choicest of varieties, grown, as in all the parks to a high development adapted to maintaining the picture as long as possible in the time



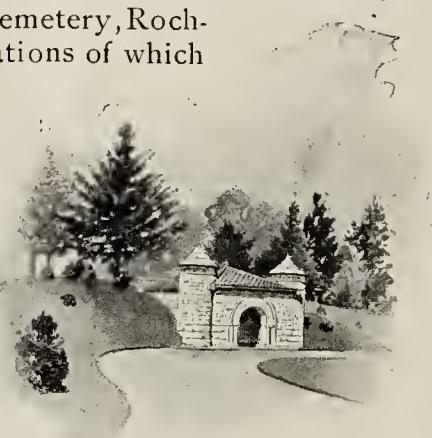
CHRYSANTHEMUMS IN WASHINGTON PARK.

of year when flowers seem to be shy. No better way of passing a day can be imagined, than in enjoying the flowers freely offered in the admirable conservatories of the parks of Chicago to its citizens.

RIVERSIDE CEMETERY, ROCHESTER, N. Y.

Among the modern cemeteries, which have been projected and established strictly under the lawn plan, as that term is understood in its best significance, is Riverside Cemetery, Rochester, N. Y., illustrations of which are given. Active work began on its development only six years ago, but the views are very expressive of the strides that have been made in actual progress, and further than this, the quality

RECEIVING VAULT.



of landscape art that marks its condition today. To start a cemetery under the conditions involved in a strict interpretation of the lawn plan, implies the ignoring of much of current prejudice and old established custom, and a campaign of education to set forth the desirability and advantages of modern ideas. This involves large outlay to prepare the grounds as an object lesson in the beginning, and as a means to induce the purchase of lots. It requires strong business foresight and common sense to engage in such an undertaking, but the end justifies the venture, as is demonstrated in the growing success of this cemetery.

Riverside comprises one hundred acres of beautifully diversified land, one mile from the city limits of Rochester, N. Y., and about four miles from its business center. It is bounded on the west by the boulevard which runs to Lake Ontario, and on the east by a romantic stretch of the Genesee river. The original plan of the association to preserve and improve every feature of the

groundsthat would finally lead to the finest landscape effects, are being consummated as fast as practicable by the superintendent, Mr. J. H. Shepard.

Along the high banks of the river a considerable

belt of woodland has been preserved, through which a most picturesque drive skirts the stream. This has been left practically in a state of nature, and wherein a wealth of ferns and wild flowers, in their season lend their varied charms, to attract attention and divert the mind. Between the belt of woods which it is intended shall



ENTRANCE.

remain as a part of the development, and the boulevard, the grounds extend in such undulating contours as to offer fine opportunities for effective planting, and the natural features of the land have been interfered with as little as possible, consistent with the work required to adapt it to the purposes for which it was secured.

Some small lakes, fed by natural springs, help to complete the series of pictures which are offered to the lot owner and visitor in this cemetery. The beauties of the Genesee river, bounding the property on one side, offer great opportunities for adding to the landscape attractions of the grounds.

Under the strict observance of the lawn plan, one sees little to detract from the lovely lawns and most effective plantings save here and there a monument. There are no mounds, and stones marking individual graves are set level with the grade and have their inscriptions on top. These also must not be less than six inches thick, and only one is allowed at each grave. Another



VIEW IN RIVERSIDE CEMETERY.

rule is that only one monument rising above the level of the lawn is permitted to be erected on any lot, and this must be not less than twelve inches thick. The officials exercise an efficient oversight

in regard to monuments, not in any arbitrary spirit, but so as to secure the very best results and to maintain that aspect of the cemetery that shall re-

will be very suggestive elements in the ceremonies.

With regard to the present and future care of the cemetery, under the laws of the State of New York, perpetual care is provided for all lots. Single grave sections receive the care due them, and are not isolated and neglected, as is unfortunately the case in many cemeteries.

Enough has been said to show that Riverside Cemetery has been established and is being conducted under the lawn plan on a high plane. The officers of the association have never doubted of its final success, and while in its first years of existence sales were few, the citizens of Rochester are awakening to its attractions as a place of burial, and the sales of the past fiscal year will double those of the year before. Mr. Dean Alvord, the secretary and treasurer, has been an active spirit in this enterprise; his love

of trees and landscape imbued him with a strong faith in the ultimate recognition of the lawn plan in cemetery work, and the growing appreciation of Riverside and its promise of marked success are confirming him in the wisdom of his faith.

A German authority on forestry announces the discovery, in India, of a tree having leaves so highly electrical that whoever touches one of them receives a severe electrical shock. Even upon the magnetic needle this tree, which has been given the name of *Philotcea electrica*, has a strong influence, causing



VIEW IN RIVERSIDE CEMETERY.

tain forever the admiration and respect of the lot owners.

A matter worthy of special comment is the good progress toward a finished result that has been obtained in the comparatively short space of time of six years. This may be ascribed to the fact that the whole plan was, so to speak, "cut and dried" before operations were commenced, since which the work has been prosecuted under the most skillful guidance with a definite aim in view, that of producing the most natural effects. The cemetery displays quite a variety of trees and planting material, and Mr. Shepard has also made extensive use of attractive native shrubs, which are so effective in their autumn fruitage and coloring. To maintain this condition a propagating nursery of shrubs is set apart, in which the work of cultivating appropriate material and experimenting on other promising plants is carried on.

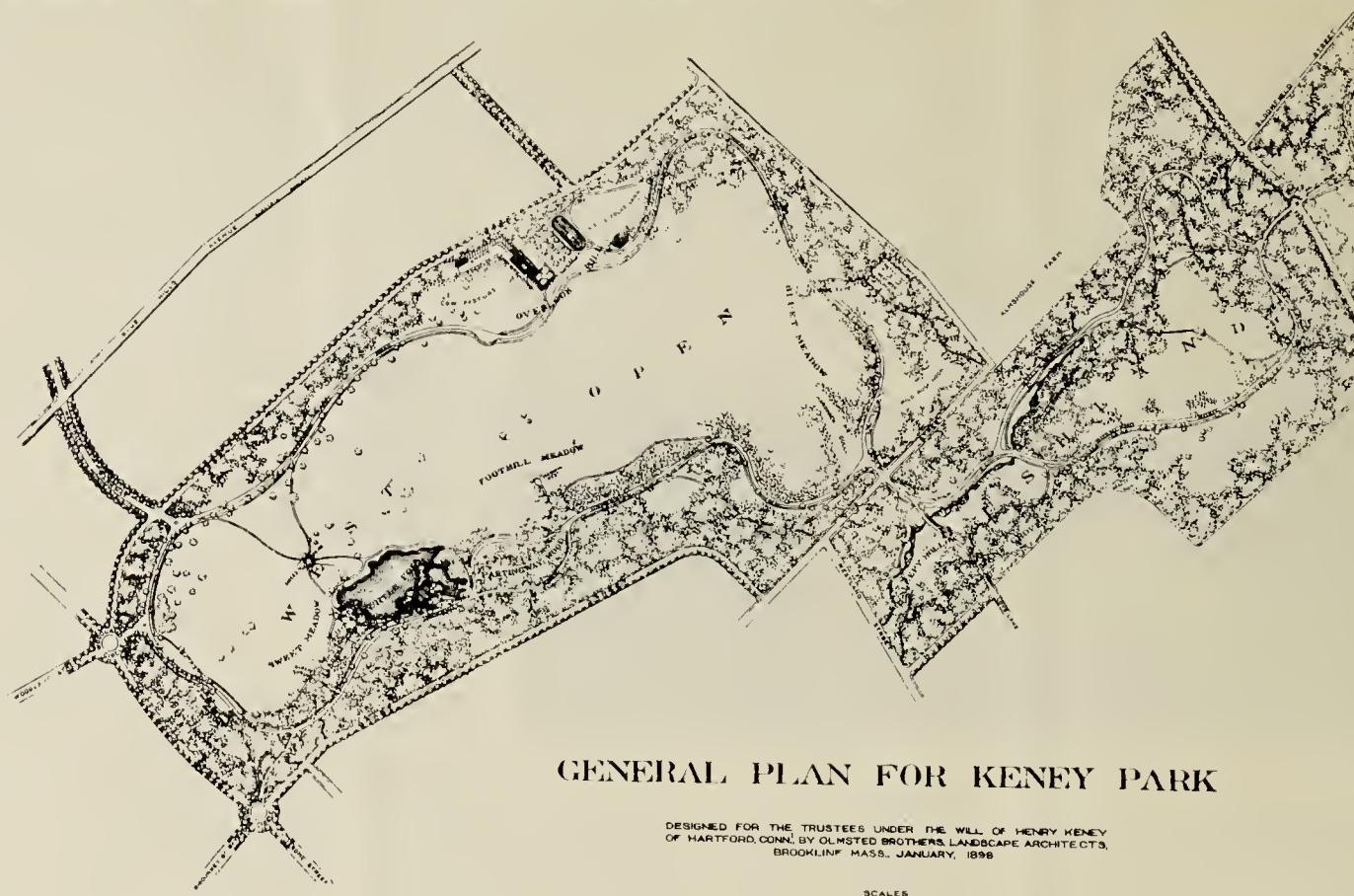
About and in the lakes, aquatic and semi-aquatic plants are grown. The collection of Japanese Iris affords a fine display in its season.

The offices, superintendent's residence, and Receiving Vault are all well designed buildings, substantially constructed of stone. Among other proposed buildings is a combined chapel and conservatory, for the use of those desiring to hold services at the cemetery. It is designed to have the chapel a part of a large conservatory, wherein birds and beautiful plants



VIEW IN RIVERSIDE CEMETERY.

magnetic variations at a distance of seventy feet. The electrical strength of the tree varies according to the time of day, being most powerful at noon.



GENERAL PLAN FOR KENEY PARK

DESIGNED FOR THE TRUSTEES UNDER THE WILL OF HENRY KENEY
OF HARTFORD, CONN., BY OLNSTED BROTHERS, LANDSCAPE ARCHITECTS,
BROOKLINE, MASS., JANUARY, 1898

SCALE

KENEY PARK, HARTFORD, CONN.

No city in the country can boast of greater possibilities in regard to its parks than Hartford, Conn., and few cities, if any, can ascribe so comparatively large an area of beautiful park property to the munificence of its citizens. The natural beauty of the locality, generally speaking, is very striking, and the design and treatment of its park areas have been in the hands of men of distinction in the profession of landscape art. The late Charles L. Eliot was for some time closely associated with the development of the system.

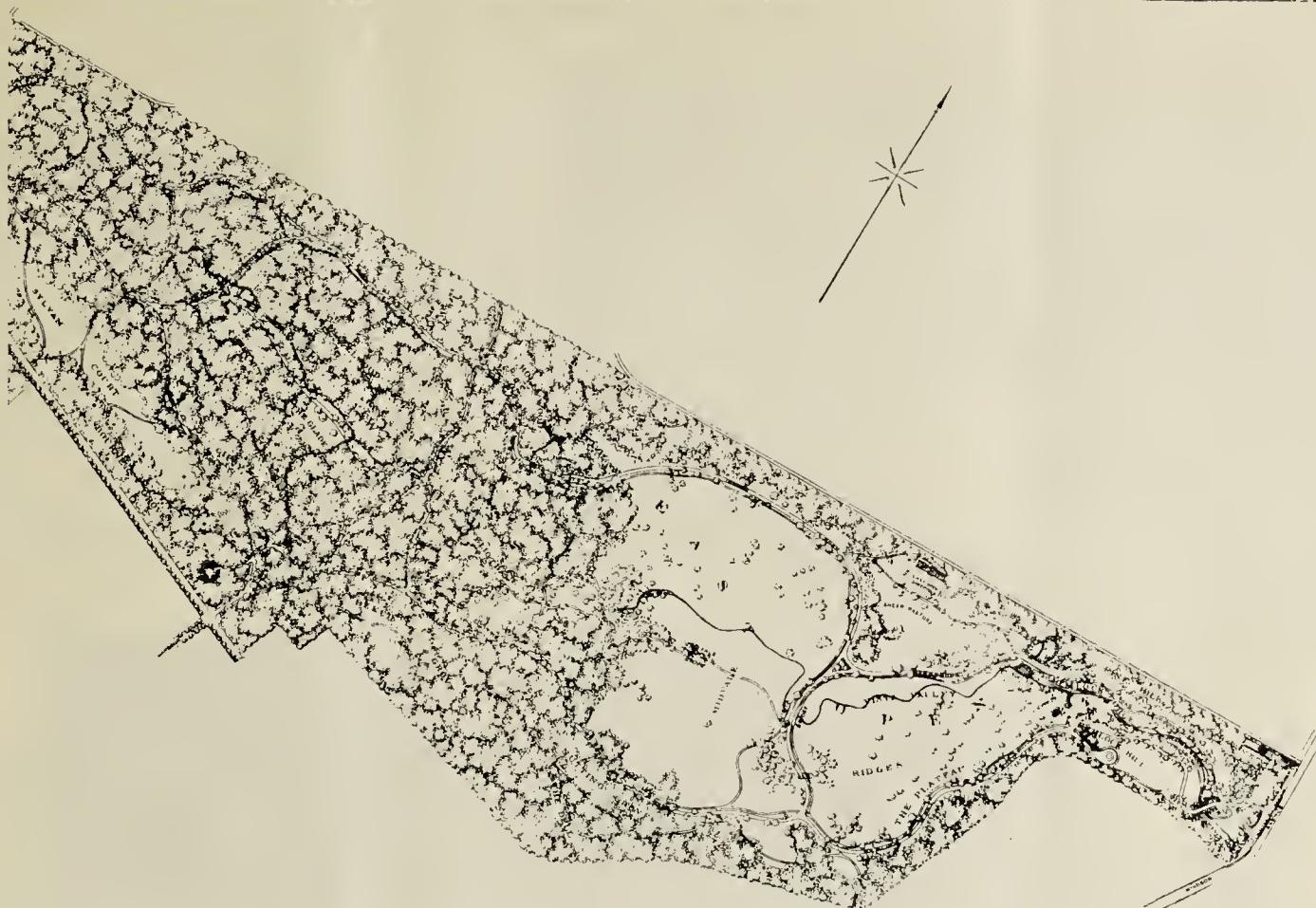
Keney Park, the subject of these present notes and of which a general plan is given above, is the latest addition to the park system of Hartford, recently opened to the public. It is the outcome of the munificence of the late Henry Keney, who died Nov. 15, 1894, who by the terms of his will bequeathed a great fund to be expended in establishing and maintaining a public park. This fund was placed in the hands of trustees until such time as the grounds were in a condition to be turned over to the city for park use.

It comprises some 522 acres of very diversified land, traversed at present by over 8 miles of roads and 16½ miles of paths. It lies in the northern section of the city, 1¾ miles from the City Hall to the Sigourney circle entrance (lower left hand corner on above plan) and 3 miles from the City Hall to the Windsor avenue entrance, at the extreme right on the plan.

Entering the park at Woodland circle, a short distance through Woodland by driveway or path brings one to a beautiful tract of upland and meadow, 167 acres in extent, bounded by woods and parkways. Near the south end of this area is Turtle Pond, the largest body of water in the park. About this area are some very attractive features, including the farmstead, where a small farm with dairy is carried on, and near by the Wading Pool and Little Folks' Lawn. Other attractive and suggestive details may be discovered on the plan. This area forms, as it were, one section of the park, separated from what might be termed the middle section by Vine street, which traverses it.

The middle section has great variety in its topography, and has the general name of Bushland. One of its principal features is the nursery for forest trees and shrubbery which has been developing for two years past. It now has a goodly stock of planting material for use when required. The drive through this section offers great diversity of scenery. It skirts along under a strip of woodland and by the banks of Gully Brook, which is here a wholesome and picturesque stream. There are some very attractive features in landscape effects in this section, which contains 69 acres, the major portion of which is forest.

The third section of the park and the largest tract, is separated from Bushland by Tower avenue, as will be observed on the plan. Its main features are the Ten Mile Woods and the East Open. The



natural beauties of the Ten Mile Woods have been long appreciated by lovers of natural scenery. It contains pretty well all the varieties of plant and tree life indigenous to this section of New England. It would make a fine park of itself and is rich with the combination of hill and vale and all the little bits of scenic change, that make a woodland walk or drive of such infinite charm. It is indeed rare to find such park land so close to a thriving city of the extent of Hartford, and it is an exceedingly fortunate matter that the trustees of this bequest were enabled to secure these adjacent tracts, to the end of creating a park capable of improvement on lines of the most refined landscape art and to include every desirable adjunct for the recreation, pleasure and comfort of the people for whose enjoyment it is designed. The following description of this woody section from the *Hartford Daily Courant* is worth of repetition: "Near the Barbour street entrance, which is across Tower avenue, is the Dingle, a tangled bit of sprout land, well grown and very picturesque, leading to Bourne Grove which skirts along the avenue. This grove is of narrow width and just north of it is one of the beauty spots of the park, Sylvan Court, a long strip of open upland completely surrounded by forest. It has been a charming rendezvous for wood parties for many years, and has in it a reminder of bits of English scenery which have been reproduced in prints and are familiar to all readers. To the northwest of Sylvan Court there is an uninterrupted

growth of forest nearly a mile in length and perhaps half a mile in width, which is broken only by the roadway and walks of the park. This tract of forest is so dense that since the park has been open to the public persons have been lost in it."

The East open comprises a variety of scenery and is intersected by Meadow Brook. The most attractive feature, perhaps, of the park as a whole, lies not far from the Windsor avenue entrance, and is called Hemlock Gorge. It is formed by Meadow Brook cutting through a ledge of shale trap rock on the one side and a steep hill on the other. It is from 40 to 50 feet deep, and is overhung at intervals by pine and hemlock trees, through which the sun breaks and lights up the miniature pools and rapids of the brook. Ridges and plateaus overlook the gorge, from which are obtained lovely and far-reaching views of the Connecticut valley.

Keney Park has been improved on plans prepared by Messrs. Olmsted Brothers, landscape architects, of Boston, under the direction of Mr. G. A. Parker, superintendent.

Besides Keney Park, Hartford possesses some 430 acres of park property, the other principal parks being: Bushnell Park, containing 14½ acres, Elizabeth Park, of 93 acres; Pope Park, 89 acres; Riverside Park, 68 acres, and South Park, not yet definitely named, which includes at present 131 acres, but which will probably be increased to 200 acres. The oldest park of any extent is Bushnell, which adjoins the Capitol grounds, and was laid out in 1854.

NATIONAL CEMETERY, ARLINGTON, VIRGINIA.

It gave me much pleasure one beautiful day last autumn to re-visit Arlington National Cemetery, lovely Arlington, a place so beautiful and interesting that one can hardly tear himself away from it. And it happened, too, that the month of my visit was the same one as that in 1862, when a youngster, I had tramped about the same ground, one of thousands of others who were preparing for war's "magnificently stern array." Fort Myer, which adjoins the cemetery, stands, as it seems to me now, on the very ground on which my tent was pitched. Traversing again the grounds and the cemetery, now more thickly peopled with dead heroes than it was then with living aspirants for fame, how the past came rushing to my mind. The daily drills,

teries. There are certain portions used for interments, such as the beautiful one shown in the illustration, then there are acres of ground of park land, splendidly kept and with drives through them, permitting the examination of every part of it. Arlington, as is generally understood, occupies an elevated site on the opposite side of the Potomac from Washington. From near the mansion, Gen. Lee's late residence, a splendid view of Washington and the Potomac is had, and to the left, Georgetown, and the beautiful buildings in the vicinity of Rock Creek greet the vision. Though so near to the capitol of the Nation it seems far away from it, as the calm waters of the broad Potomac flow between, and on the Virginia side there are no dwellings near it, near to Washington as it is. It is



VIEW IN ARLINGTON CEMETERY, ARLINGTON, VA.

the smell of the pennyroyal which we disturbed in our evolutions, the camp-fire at night, and, lastly, the bugle call early one morning to pack up and march.

"And there was mounting in hot haste: the steed,
The mustering squadron, and the clattering car,
Went pouring forward with impetuous speed,
And swiftly forming in the ranks of war;"

And soon the identity of the regiment was almost lost in the vast throng of fifty thousand men who were en route to what proved to be the battlefield of Antietam.

Arlington of today is far more beautiful than it was in those days, though 'midst the general destruction of trees which occurred in the days referred to, many of the finest of those of Arlington were preserved. The cemetery is today one vast park, lovely in its solitude. There is far less of what is artificial about it than is common in most ceme-

quickly reached from Washington. The Mt. Vernon Electric Road has a branch running to it, which brings one in on the southern side of the cemetery. Another road runs by way of Georgetown and Fort Myer, approaching the cemetery on the opposite side.

The grounds are so large that much more room is given to each grave than is usually seen. There are two sections, in one of which the privates are interred, in the other, officers. The illustration shows a portion allotted to privates. Between each stone are six feet, with alleys of fifteen feet. As the dead were gathered from no one field, but from the many which stretched between Washington and Richmond, their remains are not interred by states, but promiscuously, as it seemed to me. The little tablet seen at the head of each one contains the number, as per record book, the name of the soldier and the state from which he came. For ex-

ample, a magnifying glass will show the next to the last stone in the first row to have on it 7372. G. S. Bonnell, Pa., the one immediately behind it is New York, and the one to the right, Maryland. Every state that sent soldiers to the front has some of its dead here. Thousands and thousands of heroes are here, and it is a sad pleasure to wander through the lovely place and to think that the brave men rest now. They have fallen "into that dreamless sleep that kisses down their eyelids still."

There are many stones there telling me of those I knew, and bringing to mind reminiscences of the past, I stretched myself on the grass be-



TEMPLE OF FAME, ARLINGTON CEMETERY, ARLINGTON, VA.



MONUMENT TO GEN. SHERIDAN, ARLINGTON CEMETERY, ARLINGTON, VA.

neath the monument to General Sheridan, musing of the past and thinking of those beneath the sod of whom it could be said—

"The muffled drum's sad roll has beat
The soldier's last tattoo,
No more on life's parade shall meet
That brave but fallen few"—

I could not but think that well had their country done for them in placing their remains in beautiful Arlington.

The "Temple of Fame" and the Monument to General Sheridan, illustrated on this page, are among the interesting features which attract attention.

Joseph Meehan.



Speaking of the leafage of trees, John Ruskin, the distinguished English philosopher and art critic, says: One of the most remarkable characters of natural leafage is the constancy with which, while the leaves are arranged on the spray with exquisite regularity, that regularity is modified in their actual effect. For, as in every group of leaves some are seen sideways, forming merely long lines, some foreshortened, some crossing each other, everyone differently turned and placed from all the others, the forms of the leaves, though in themselves similar, give rise to a thousand strange and differing forms in the group; and the shadows of some, passing over the others, still further disguise and confuse the mass until the eye can distinguish nothing but a graceful and flexible disorder of innumerable

forms, with here and there a perfect leaf on the extremity, or a symmetrical association of one or two, just enough to mark the specific character and to give unity and grace, but never enough to repeat in one group what was done in another, never enough to prevent the eye from feeling that, however regular and mathematical may be the structure of parts, what is composed out of them is as various and infinite as any other part of nature. Nor does this take place in general effect only. Break off an elm bough three feet long, in full leaf, and lay it on the table before you, and try to draw it, leaf for leaf. It is ten to one if in the whole bough (provided you do not twist it about as you work) you will find one form of a leaf exactly like another; perhaps you will not even have one complete."

SOME SPECIMEN TREES AND SHRUBS.

Subscribers can make this column particularly interesting by forwarding photographs and descriptions of specimen trees and shrubs.

RETINOSPORAS FOR CEMETERY PLANTING—THE EUONYMUS AS A TREE CLIMBER.

In a discussion at the Omaha Convention of the American Cemetery Superintendents, Mr. John Reid, superintendent of Mount Elliot Cemetery, Detroit, Mich., and an authority on tree culture, defended the Retinosporas as being subjects of rare beauty in the way of evergreens for cemetery embellishment. Mr. Reid has sent us the photographs from which the illustrations herewith presented are made, and which are most interesting in connection with the description accompanying them, here given in Mr. Reid's own words:

"I stated, that we succeeded in growing several varieties of Retinosporas at Detroit, Mich., where, during severe winters, the mercury drops to fifteen degrees below zero, and I believe that many cemeteries even in a colder climate have locations where they will succeed by proper preparation of the soil, and by protecting the roots from severe freezing for the first few years. They are attractive even at one

see on plate No. 1, one of them, *Retinospora Filifera Pendula*, nine feet high and seven feet through the branches at the ground, in perfect vigor and beauty.

"Plate No. 2 shows trunk of large elm covered with *Euonymus Radicans Variegata*, to a height



NO. 2. ELM COVERED WITH EUONYMUS VARIEGATA.

of eighteen feet, and Plate No. 3 shows the trunk of a Norway Spruce, on the same lot, covered to about the same height. Both are beautiful at all seasons of the year.

When growth begins in the spring, the young leaves are margined with a golden-hued band, giving a very pretty effect. As the growth becomes more mature, they change to a white margin and a green center, retaining their foliage during the winter without any protection.

"Previous to my own experiment, I had never seen this plant used for covering trunks of trees. Many visitors of wide experience in horticulture admired its beauty, and were surprised at its adaptability for such a use. I have had it for many years in small bush form, but a few years ago, being attracted by its peculiar habit of forming into two or more twisted divisions, I examined it carefully and found many of its branches supplied with aerial rootlets such as the ivy and other climbing plants have, and this led me to select a place to test its climbing qualities, with the result shown.

"There are very few more admirable objects than the trunk of a tree covered with Euonymus, and a few plants of *Lonicera Aureum* planted around

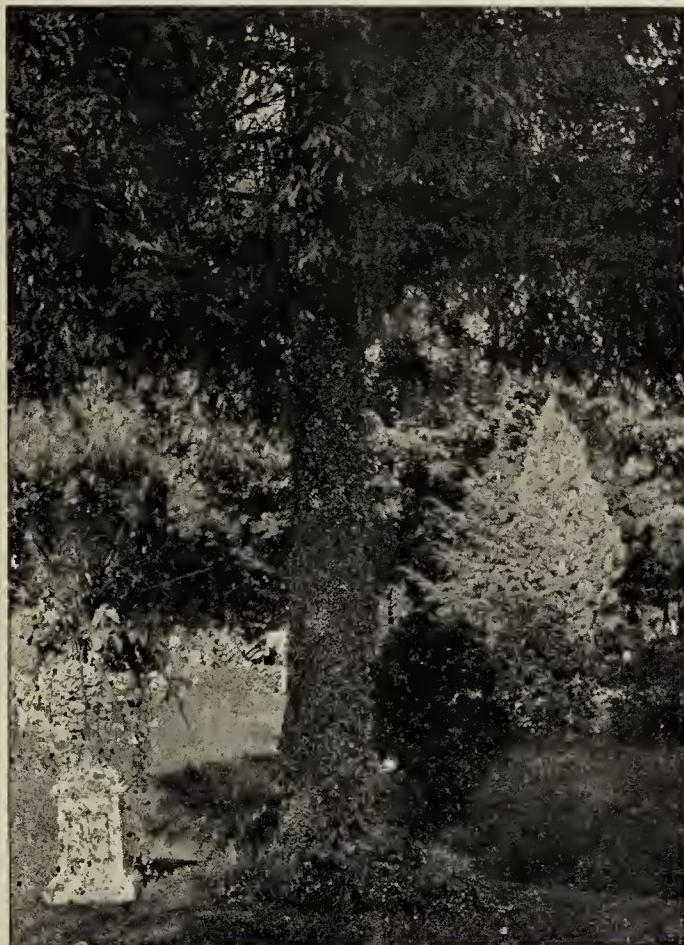


NO. 1. RETINOSPORA FILIFERA PENDULA.

foot high. Their slow growth, various beautiful tints, and graceful habit, make them peculiarly adapted for cemetery purposes.

"It may be of some interest to your readers to

the base of a tree. It must be remembered that plants in such locations require a supply of rich food annually.



NO. 3. NORWAY SPRUCE AND EUONYMUS RADICANS VAR.

"I should like to hear from the readers of the PARK AND CEMETERY if Euonymus has been used for covering the trees; if so, is it injurious to their vitality?"

TAMARIX AMURENSIS.

The accompanying illustration shows a specimen of the Tamarix Amurensis, growing on the grounds of the Agricultural Experiment Station, University of Minnesota, St. Anthony Park, Minn., and to which reference was made in a previous issue by Prof. Samuel B. Green of the station.

In a communication on the subject Prof. Green says:

"Herewith I send you a photograph of Tamarix Amurensis taken on our rounds. It is a plant that I think very highly of on account of its hardiness and the pretty effect which it gives to shrubberies. It has proven by far the most satisfactory of the Tamarixes which we have tried here. With us it frequently kills back several feet but it starts so early and so strongly in the spring of the year that it grows out of the injury and in a little while makes a fine show. I have seen this plant doing exceed-

ingly well on the grounds of the Brookings Agricultural College at Brookings, S. D., where it is fully exposed to the dry prairie winds and in one of the severest localities of this section."

"I know that it would add much grace to the shrubbery of the cemeteries and parks in this vicinity if it were used more and I take it that is about the situation elsewhere. I have often noticed that planters of trees and shrubs are very apt to follow in ruts, planting only a very small list, and that it often takes them a long time to get hold of any new thing."

"This Tamarix is something that is propagated so easily that it can be used in large quantities



TAMARIX AMURENSIS.

without much expense. It grows as freely from fall made cuttings as most of the willows."

The Jericho Weed.

The Jericho weed, says an exchange, is a unique giant among American weeds. It is a mass of tangled vegetation six feet in diameter. Until fall it behaves like other plants, but when the winds of autumn dry its sap it goes on a vegetable cowboy spree. Its drying up does not make it shrink in size—only makes it lighter. It loosens from the soil and when a cyclone or tornado comes tearing along, these huge balls fly before the wind, bounding and leaping across the plains. Is it any wonder that the cattle and sheep are frightened out of their wits when they see these strange and fearsome things coming down upon them, and flee for their lives, more scared of the Jericho balls, perfectly harmless though they be, than of the terrors of the approaching storm?

ROYAL BOTANIC GARDENS, KEW, SURREY,
ENGLAND. VII.
ARBORETUM.

The Arboretum contains 3,000 distinct varieties of trees and shrubs. In Queen Caroline's time the Richmond Gardens possessed agreeable wild features and their designer—Bridgeman introduced "morsels of a forest appearance" in its vistas and Sir Henry Capel's love for plants prompted him to give forty pounds for two *lentiscus* trees—said to be the finest "greens" (evergreens) in England in the latter part of the seventeenth century. Perhaps the real starting point of the Arboretum was the removal of the Duke of Argyle's trees and shrubs from his seat near Hounslow to the Kew Gardens in 1762, at that time the property of the Prince of Wales.

In 1763 Sir John Hill published a catalogue of plants cultivated at Kew—which included about 600 trees and shrubs. Originally the Botanic Garden comprised about 11 acres and in 1844 forty-seven acres were added wherein to establish a Pinetum. In 1847 the 250 acres included in the "Pleasure Grounds" were added and no pains were spared by Sir William or his successors to amass the finest and most complete collection of hardy trees and shrubs possible to be formed. In 1866 old beeches, elms and oaks rather neglected for the previous half century were revealing the effect of a sterile, gravelly, fungused soil and proper means were adopted for the salvation of those redeemable.

The weaker specimens were removed and the remainder supplied with nutritious soil—a timely operation that preserved many of those that remained the most majestic individuals on the grounds to this day. The preserving and restoring hand of Sir William is prominently marked in the Arboretum. In the winter of 1866-7 the snow-storm wrought havoc amongst the trees, particularly the tender pines and cypresses and more than half the shrubs were completely destroyed. Evergreen oaks were stripped of their foliage and the majority under fifteen feet high perished and of the Monterey Pine of California (*Pinus insignis*) barely one escaped death. Araucarias and Deodars suffered materially, *Laurustinus* were in most instances killed; the Sweet Bays absolutely and the Portugal Laurels and Aucubas severely injured. The Sikkim Rhododendrons were in general defoliated. Considerable injury was largely due to the weight of the snow and the low lying and flatness of the grounds, but the singular fact remains that in 1860-61 less damage was experienced at Kew

than at other neighboring localities while in 1866-67 it was vice versa. Araucarias chiefly suffered at the bases where the snow settled in the lower branches while Deodars were affected above this level. The poverty of the soil is notable as recorded in the growth of 88 Deodars on the Syon-vista after twenty-two years growth, in 1868 they still were less than ten feet in average height. This vista extends from the stately Palm House across the Thames and Syon meadows to the Syon wood, nearly three quarters of a mile distant. Three thousand feet of its length are in the Gardens—where its width is eighty-four feet. The failure of the Deodars on this vista prompted Sir Joseph to plant Douglas firs alternated with evergreen oaks within the rows of Deodars.

The planting of collections was scrupulously attended to—usually disposing the old world species of an order on one side of the gravel or turf walk or avenue, and the new world representatives on the opposite. The conditions involved under the concession of the Pleasure Grounds to the Botanic Garden under Sir William Hooker were with the intention that they should be formed into a "National Arboretum," and accordingly the main features of a plan prepared in 1846 by W. A. Nesfield—

whom we believe was the designer of Regent's Park—for this purpose were carried out at that time and have ever since been worked upon. To-day in a circuitous ramble the entire collection of trees from Magnoliaceæ to Coniferae can be inspected in regular botanical sequence. In the case of Roses, Azaleas, Rhododendrons, etc., a special additional area is set aside in juxtaposition to the area allotted to the species—for the reception of the most ornamental species, varieties and hybrids—with a special appellation as the "Rose Garden;" "Azalea Garden;" "Rhododendron Dell," etc.

Perhaps the most lucid manner of conveying an idea of the Arboretum is to briefly comment on certain individuals, leaving them to suggest their own traits as we are impressed by them in personal inspection. The Arboretum consists practically of plants in the North Temperate and Arctic Zones. The South Temperate Zone is about the same as the North Temperate in temperature but the seasons are reversed. But few of the South Temperate region plants grow well in the North Temperate although curious enough there is no difficulty vice versa. In the temperate zone of Europe there are about 10,000 plants; in America about 10,000 more and in Asia still incompletely explored—about 10,000 more. Of this number about one-third are trees and shrubs.



From a photograph by A. Rehder.
ARAUCARIA IMBRICATA. (See W on plan.)

Many shrubs and dwarf trees are grown against brick walls here, a position rendering hardy otherwise tender species. Ordinarily one specimen of a species represents the type and with its varieties is grouped according to its nearest allies. Shrubs very frequently occupy a bed from four to fifteen feet in diameter for each species. In Ranunculaceæ, clematis coccinea of Texas, C. Tremontie, C. Pitcheri, C. Virginiana, Xanthorrhiza pifolia are representatives of the United States and all deport themselves fair. Calycanthus floridus and glaucus of the southern United States and C. occidentalis of California seem quite suited in the Kew soil. Chimonanthus fragrans from Japan does best on a wall where in mid-winter its profusion of fragrant blossoms are most acceptable. In Magnolias, conspicua has bloomed better than any other I have seen over there but the hardy deciduous flowering shrubs and low trees as a whole are not as floriferous as in the United States. Two M. glauca plants within twenty feet of each other are interesting in that while one is typically deciduous, the foliage is quite persistent the entire winter, in the other. M. grandiflora is trained on a wall in several situations about the garden but it is quite hardy without protection, the small M. stellata of Japan, flowers intermittently through the summer—where special beds are provided. Gladioluses are planted amongst them.

In Berberidaceæ, the Akebia quinata proves itself a worthy subject of Japan, Berberis aquifolia, largely planted throughout England for game coverts, looms up the year round, but the abundance of evergreen vegetation hardy here discounts that striking appearance, so excellent a shrub like this would assume in northern United States. B. buxifolia does well for a Chilian plant and B. Darwinii is extra good. B. Stenophylla (B. Darwinii x B. empetrifolia) is admirable. In Battersea Park, London, is a plant eight feet in diameter and over five feet high, in shape hemispherical and compact, rising directly from the ground. B. Lycium, cretica vulgaris and canadensis thrive very well.

All the species of that polymorphic genus, Helianthemum, grow well. Idesia polycarpa (Flacourtie Japonica) is among the more uncommon plants. Actinidia polygama from Japan has the ever sickening appearance it shows in cultivation. This is not A. arguta which is usually cultivated in America as polygamia.

In Rutaceæ—choisya ternata from Mexico forms an excellent plant rarely seen in American gardens.

From China and Japan Rhus Asbeckii and R. succedanea in Anacardiaceæ are still small plants and their fitness for English as well as northern United States climate has to be proven.

Spartium junceum in Leguminosæ is quite hardy and well shaped but Andre's variety of Genista scorpiarius is far more floriferous in America although not so hardy.

In Rosaceæ our Prunus augustifolia is cultivated as Cerasus Chicasa and P. pumila is not separated from P. crenata. That beautiful P. lusitanica—one of the four different plants known as laurel-ivy, it is to be regretted is not hardy in our northern states.

Jamesia Americana of the Saxifragaceæ grows about as well in America, but Fendlera rupicola of our arid re-

gions I did not notice. Ribes aureum and sanguineum of the West are quite inferior to their deportment at home.

In Cornaceæ, Cornus Florida, Stolonifera and candissima hold their own with those from all other countries. Aucuba Japonica is in extensive use and forms a large part of the broad leaved evergreen scenery in England.

Except the Himalayan sorts Rhododendrons do exceptionally well out of doors and rival the roses.

On the other hand many of our plants grow or flower very poorly. Quercus Georgiana, Buckley a distich ophylla, Styrax Americanum, Halesia diptera, etc., are instances. Among trees one expects grand old trees of Fagus sylvatica, Quercus Robur and pedunculata and Castanea sativa, but exceptions are beautiful specimens of Quercus suber, Cerris and Ilex; Ilex opaca etc., Pinus monticolo, excelsa and Pinea.

The hardy collections of trees and shrubs are extraordinarily rich in species and varieties. One comes not amiss in looking here for a wealth of vegetation in keeping with the dignified prestige of the institution.

Emil Mische.

The Sleep of Plants.

The sleep of plants, which is the same physiologically as animal sleep, does not exist without reason. The art of sleeping is, in the higher animals, symptomatic of repose in the brain and nervous system, and the fact of plants sleeping is one proof of the existence of a nervous system in the members of the vegetable kingdom.

Plants sleep at various hours and not always at night. The duration of plant sleep varies from ten to eighteen hours. Light and heat have little to do with plants sleeping, as different species go to sleep at different hours of the day. Thus the common morning glory (Convolvulus purpureus) opens at dawn, the Star of Bethlehem about 10 o'clock, the ice plant at noon. The goat's beard, which opens at sunrise, closes at midday, and for this reason is called "go-to-bed-at-noon." The flowers of the evening primrose and of the thorn apple open at sunset, and those of the night flowering cereus when it is dark.

Aquatic flowers open and close with the greatest regularity. The white water lily closes its flowers at sunset and sinks below the water for the night; in the morning the petals again expand and float on the surface. The Victoria Regia expands for the first time about 6 o'clock in the evening, and closes in a few hours; it opens again at 6 o'clock the next morning, and remains so till afternoon, when it closes, and sinks below the water.

For upward of 2,000 years continuous attempts have been made to elucidate the phenomena of sleep without success; many theories have been promulgated, but they have fallen short of explaining it. We know that sleep rests the mind more than the body, or, to put it in another way, the mere physical as apart from the nervous portion, of the organism can be rested without sleep. Negatively the effect of sleeplessness proves the value and necessity of sleep. And this is seen in a marked manner in the case of plants.—*Gentleman's Magazine.*

TREE PLANTING ON PUBLIC STREETS.*

Any city or village, however inexpensive its buildings, can be made attractive by planting trees and otherwise embellishing the public streets with borders of grass and beds of shrubs and flowers, thereby giving them a park-like appearance, which is very pleasing to the eye, and refining in influence.

The pioneers of our New England cities and villages appreciated the value and beauty of shade trees, and as a result, we have such attractive cities as Bangor and Portland in Maine, New Haven and Hartford in Connecticut, Springfield, Salem, and nearly all of the villages of New England, whose grand old elms spread their sheltering arms over the modest houses of the descendants of the men whose love for nature induced them to plant trees wherever they became the owners of land on which to build homes.

Why are those old cities called beautiful? What makes them so attractive to the tourist and the seeker of rest? It is not the architecture of their residences, as the majority of them are very plain and but few have architectural features worthy of attention. Their great attraction is the trees which border their streets. There are cities dear to the recollection of all sons of New England where certain thoroughfares have a wide reputation for their attractiveness, on which there are no large estates, and very few fine houses, nearly all of the residences being very plain, built on the street line and near together, but the noble elms which form arches over the streets, and screen the imperfections of the houses, which, from an elevated point of view, seem half hidden in a border of waving foliage, form a picture which is photographed upon the mind of all who see it, and they exclaim, "What a beautiful city!" I was born and reared under those grand old elms, and much of the happiness of my life has been derived through my love and reverence for them.

"A pleasant argument of the lurking instinct for arboreal life might be found in the fact that we like to give the name of roof-tree to our domicile, although the roof tree may be brick or stone."

"Thousands upon thousands of the sons and daughters of New England left their homes with the love of the old roof-tree in their hearts, and this love carried its influence wherever they made new homes, and the memories of the old, with the longing for the trees, resulted in the planting of streets and roadways which are the pride of many cities and towns in our middle and western states. One of these daughters writes: "In memory's chart of the little world of childhood, does not some best beloved tree mark the center thereof, and is not the tree's morning or evening shadow the radius of the golden day's round?"

Most children are born with a love for flowers and

trees, and all that is beautiful in nature, and even when reared under the depressing influences of the tenement houses of our large cities, the oyster cans and old bottles on the window ledges filled with the growing plants testify that this love is difficult to crush out of the hearts of the unfortunate tenants. But, alas! too many children grow up without the refining influences of nature's floral gifts, and as a consequence their natures are dwarfed and their lives blasted.

"God help the boy who does not know
Where all the woodland berries grow,
Who does not see the forests glow
When leaves are red and yellow.
Whose childish feet can never stray
Where nature does her charms display—
For such a helpless boy, I say
God help the little fellow."

Trees are not only for ornament and shade, but for purifying and cooling the air in summer. The exhaling power of leaves has been most carefully investigated, and the most careless observer has noticed its effect in cooling the air when passing through a wooded road on a warm day in summer.

It is also a well known fact that trees radiate heat in winter, and that the more there are in a neighborhood the more equitable is the climate.

It is as much the duty of city and town authorities to plant trees as it is to build sewers, for both are sanitary measures, and it ought to be a matter of pride to the citizen to see that his street is not only healthful but beautiful.

Trees, as a rule, have been planted too thickly in most of our older cities. Large elms and maples are frequently seen crowded together, ten and twelve feet apart, and as a consequence they are misshapen and sickly, and they form a shade so dense that neither sun nor air can reach the houses. Experience has proven that it is a mistake to plant four rows of trees on any street that is less than one hundred feet in width.

Next to the folly of not planting at all, is that of over planting. Human beings require sunshine and air, but in many streets in our older cities these are excluded through the over-planting of trees, or the failure to remove them when they have grown so large that their top branches intertwine.

The American elm is the most beautiful tree for street planting, but in some localities it is so infected with insect pests that we should encourage the selection of other varieties when practicable. In Central New York the white maple is extensively used, and if it be given the proper care when young, it makes a noble tree at maturity. In many localities the sycamore is a great favorite, but it will not grow in the Northwest. The Linden, Hackberry, Norway Maple, and the White Ash are fine street trees, especially for narrow streets.

There should be a definite plan for all municipal improvements, and in the department of tree planting

* Paper read before the American Park and Out-door Association, Minneapolis, Minn., June, 1893, by Charles M. Loring, President.

his can only be obtained through a commission having absolute authority to plant, prune or remove trees whenever or wherever, in its opinion, it is deemed advisable.

The Board of Park Commissioners of Minneapolis has authority under the park act to plant trees on any street and assess the cost of the same on abutting property. This authority, as a rule, is not exercised except when petitioned to do so by a majority of the residents of the street.

The cost of planting and caring for the trees for three years is about five dollars, but this sum is undoubtedly under, rather than over, the actual expense. The site of the city being underlaid with gravel, it is necessary to remove at least five yards of this material, which is replaced with the same quantity of rich loam in which the tree is planted. It would be a paying investment for the owner of the property if double the amount of loam were furnished and charged for.

Each tree is protected by a guard, which serves the double purpose of protecting the bark from the rays of the sun and from the teeth of the horses.

The planting of and caring for street trees constitute one of the most important duties of the park commission, and the results of its work have been very gratifying. Many of the streets have been improved with uniform rows of trees, and the number of petitions for thus improving thoroughfares increases each year.

Some of the older trees which were planted before the care of this work was assumed by the Board of Park Commissioners show the usual hap-hazard way in which planting was done when each owner of a forty-foot lot exercised his own will. Some planted four or five trees, each of a different variety, and never cared for them. Others did not plant any, and a few set and cared for trees which have grown to be fine specimens of their kind.

Up to the time the park commission became the custodian of the street trees, more had been planted and had died, either through ignorance in planting or through neglect, than were then growing. The loss since that time has been less than two per cent.

A commission having charge of the trees in the city of Washington has absolute control and care of them. If it decided to use a certain variety on a street, that variety is planted and there is no appeal from its decision. As a result, there is no city within my knowledge having so many unbroken rows of healthy trees.

Other cities in this country have undertaken the control of street ornamentation with great success, and it is to be hoped that all will follow their example.

As a rule, our roadways on our residence streets are too wide and there is not space enough given for trees and other ornamentation. Fine effects are produced on an eighty foot street by making the roadways thirty feet wide, leaving twenty-five feet inside the curbing on each side, six feet of which next the lot line, is for a walk

and nineteen feet for grass and flower beds, or groups of ornamental shrubs, and shade trees planted from forty to fifty feet apart.

Many object to having so much space between the trees when they are young, and this accounts for their crowded condition in many of our older cities. To overcome this, some writers recommend planting of rapid growing varieties between the more slow growing, which are to be removed when the branches of the permanent trees have grown to fill the space.

Another plan which I have seen in an eastern city gives a park-like appearance which is very pleasing. That gives a sidewalk next to the lot line six feet in width, a planting space for grass and trees six feet, and two roadways eighteen feet wide and a center planting space of twenty feet filled with grass and shrubs, or grass and beds of flowers.

There is no necessity for a roadway over thirty feet in width on any residence street of sixty feet; one that is wider is entirely out of proportion.

There is not enough attention given to the ornamentation of streets. There is no reason why the residence portion of our cities and villages should not be made as attractive as a park. A few ordinances regulating the alignment of buildings, the setting of trees and care of planting spaces, would accomplish this desirable result. But, better yet, by the education of the people through such organizations as the Village and Neighborhood Improvement Association, the Brooklyn Tree Planting and Fountain, and the Park and Outdoor Art Associations.

The gum trees of Australia are the tallest trees in the world. They average 300 feet in height.

* * *

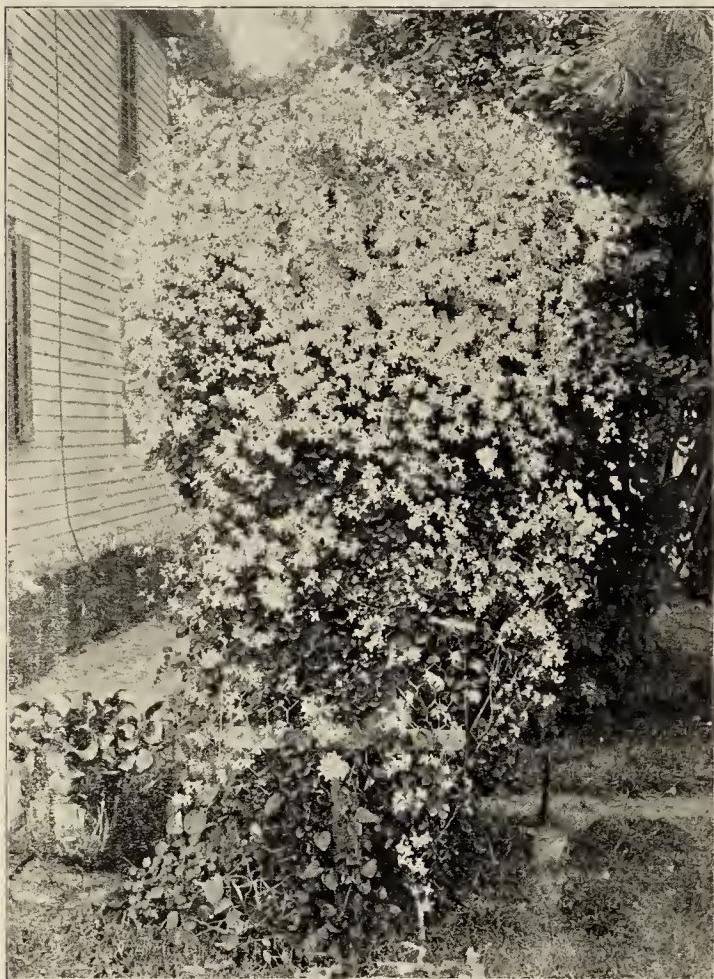
One of the largest forests in the world stands on ice. It is situated between Ural and the Okhotsk Sea. A well was recently dug in that region, and at a depth of 250 feet the ground was still frozen.

* * *

After trying all sorts of wood as street pavement, London has at last come to the conclusion that Tasmanian "stringy bark" is most enduring and generally satisfactory, being without the slippery surface which soon manifests itself in some other hard woods. The stringy bark, which grows all over Tasmania, has a rougher surface than the blue gum, thereby giving in greasy weather a better foothold for man and beast. It is in the south of the Island of Tasmania that the chief supply of timber is obtained, the forests coming down almost to the water's edge, thus making the cost and difficulty of transport small; in fact, at some of the mills vessels of 3,000 tons could partly lay alongside the pier and complete their loading by barges while lying in a perfectly secure anchorage. The London authorities experimented with woods from all parts of the world before settling on the Tasmania article.

CLEMATIS PANICULATA.

This is the best all round vine for amateurs, and one plant in every village garden would not be too many, particularly if each one were grown in a way unlike all of the others. But even if all were set in the same relative position, and trained in prac-



CLEMATIS PANICULATA.

tically the same way, the result would be far less monotonous than the barren door yards (gardens would be a misnomer) that surround a majority of the prairie villages of the middle West.

* * *

Indeed no matter where planted this clematis introduces beauty—and beauty always makes an impression. The vine makes but a poor showing when planted in a very dry and hot situation, as, for instance, close to the south side of a building having a brick or stone foundation. An eastern exposure seems to suit it admirably here in South Central Illinois, and there is a large and well developed plant of it growing close against the north side of the stone lodge at the museum entrance to the Missouri Botanical Garden at St. Louis.

* * *

The lovely plant seen in the illustration stands about six feet east of a side porch at the home of Mr. Frank Stewart in Brighton, Illinois. It is

placed just where the waste water from a much used well runs to its roots—the end of the trough is seen resting on the rocks in front of the tobacco pail filled with growing water Hyacinths. It is the result of a thrifty two-year-old plant received from a nursery in the spring of '96, and set out carefully in good, well prepared soil. It has had a top dressing of well decayed manure in late fall each year since, and at the same time the entire top has been cut off a few inches above the ground. It gets full sunshine all day, except very early in the morning and late in the afternoon. It bloomed with unexpected freedom the first year; the illustration shows its appearance in '97; and this fall the flower crop was fully double that of last year and would easily have covered a space double the size of the support given it. It converted a trellis six feet wide and six and one-half feet high into a heaped-up mound of flowers that was likened by some to the deep yet airy snow wreaths that sometimes form on evergreen trees, and to me (especially when seen by moonlight) seemed like a wonderful web of lace caught over the foliage.

* * *

The rocks, the usually overflowing water, and the pine tree standing close at hand, combined with the Clematis, produced a Japenesque effect that was this year intensified by long, slender, flowering trails of the Clematis straying up over the fine branches where the starry blossoms were shown in distinct relief against the dark green pine needles.

* * *

No Village Improvement Society can do better than to encourage the free planting of Clematis paniculata, and to lengthen the season of such beautiful and satisfactory blossoms, Clematis Montana should be planted to supply spring flowers of a similar type, and C. flammula to bloom in July.

The flowers of these three varieties are very similar, and every friend of C. paniculata should make the acquaintance of the other two.

Fanny Copley Seavey.

A CALADIUM BLOSSOM.

There is always a pleasure attending the discovery of some rare blossom in our gardens, and some little pride is always manifested in showing our friends something new or rare. As Mr. William Stone expressed it at the Omaha meeting of Cemetery superintendents: "Everybody has seen geraniums and the common things, and are always glad to see something new."

I there spoke to some of our members about having a caladium in bloom and found that many, like myself, had never seen the blossom of that plant, so I determined to secure a photograph for



A CALADIUM BLOSSOM.

the benefit of those who have not seen this beautiful flower. I wish I were able to offer also the fragrant odor that fills the air around it, but photography falls short so far when it comes to color and odor.

The bloom shown in the photograph is the third from this leaf stock and three more buds were forming at time of taking the picture. The flower is thirteen inches long, and in color is an orange yellow on the outside and a cream yellow within.

The bulbs from which these blooms came were only $2\frac{1}{2}$ inches in diameter and were planted on the margin of a lily lake, where an abundance of moisture and a very rich soil aided it in perfecting its blossoms.—*Sid. J. Hare, Forest Hill Cemetery, Kansas City, Mo.*

VINCA MINOR.

For cemetery planting few things in nature surpass the Vinca, or Periwinkle. It is so called from the Greek, meaning to "bind," and the strong, wiry stems that greedily take hold upon the soil at every joint and send up fresh shoots that for a while are like blossoming plants, but that in time spread over the surface of the ground and make strong roots and send up fresh colonies, well merit the descriptive name. One of the names under which vinca major and minor are alike listed is "creeping myrtle," but the most common synonym is the familiar periwinkle. Few vines are better known, and none more popular.

Cemeteries in all sections are so generally planted with vinca minor that by association it has become, in a measure, sacred to the purpose. Vinca

major is also a handsome vine in smooth, shining, green foliage, but it is too free in growth to be otherwise than common. Vinca minor is dainty in appearance although a very free grower. The oblong-ovate leaves are not over half an inch long, and in pairs not over an inch, or less, apart all along the stem. There are two varieties, differing only in the color of the bloom. *Vinca alba* is snowy white and *vinca cerulea* is a gentian blue. These blossoms have circular, saucer-shaped corollas and funnel-shaped throats, in texture as fine as gossamer, and with a faint perfume suggestive of the sweet flag.

Clipping or pruning the vinca adds much to its beauty. Every little shoot that branches up will be of tender green and will bear its blooms. The blooms, however, are the secondary matter, as it is the finely enameled green leaves, shining and bright, at all times, but sparkling like diamonds after every shower of rain, or of the watering-pot, or hose, that commend it.

Added to its many charms the periwinkle is perfectly hardy. Impervious to cold and indifferent to heat of summer, it covers every inch of ground allotted to its growth, and so dense is the foliage that not an inch of the soil nor of the wiry stems are to be seen. It mats so thickly that moisture is husbanded for its roots and under sides of the bright, flat-lying little leaves. During the winter the shade of green deepens, but is always shining.

Like the arbutus, vinca minor in white and blue flowers, peeps up from under a blanket of snow when the first notes of the blue-bird trills upon the air of returning spring.

G. T. Drennan.

GARDEN PLANTS—THEIR GEOGRAPHY—XXXV.

CAMPANALES.

THE CANDOLLEA, LOBELIA AND CAMPANULA ALIANCE.

This is a small Alliance of 5 Tribes, 77 Genera and 1,395 species. They were often included under the previous Alliance by the older botanists, but are now separated because, among other things, they have ovaries with two or more cells. The majority of the species are sub-tropical, those of the first two tribes being largely from the southern hemisphere. When they enter the tropics it is usually at considerable altitudes. The Campanulæ, however, have one center of production, on the mountain ranges of Europe and Asia; from the Alps, through the Caucasus, the Himalayas, the Altai range, and the mountains of northern China to Japan; and another in the Cape Colonies of South Africa. So far as I know there is not a



CAMPANULA PERSICIFOLIA.

them. They do not receive the attention they deserve, for hundreds of cottage gardens may be



CAMPANULA MEDIUM VAR.

examined that are quite without any of them. *Candollea* is an Australian genus of 87 spe-

tree in the Alliance. In the warm regions they are sometimes shrubby, but the greater number of those in cultivation are showy-flowering herbs, producing several of the finest scarlets and blues available for the hardy garden. Many of the species are bog plants or aquatics, and such as grow in sterile places are in company with other plants which partially shade and shelter



LOBAILE ERINUS VAR.

greens, often with handsome unknown to American gardens. *Scævola*, *Dampiera* and *Brunonia* are other genera occasionally met with in the Botanic Gardens of the sub-tropics, and the better class of European gardens.

Syphocampylus is a genus of maybe 100 species found in the West Indies, Central and tropical America and the Andes. There are many handsome some sub-shrubs and herbs among them with flowers in various shades of red, rose, and purple, often more or less mixed with yellow. The plant known in greenhouses as *S. bicolor* is a *Lobelia*, it is said.

Isotoma, in 9 species, are from the Society Islands, Australia and the West Indies. They are perennials, with reddish, blue, or white flowers. Some, perhaps, are adaptable to Pacific Coast gardens.



LOBELIA CARDINALIS.



PLATYCODON GRANDIFLORUM MARIESII.

plants, extending southwards through the mountains of Central America, and tender at the north.

Lobelia has 200 species (in 8 sections): 24

cies, two or three of which are widely diffused. Several are good-sized shrubs with yellow flowers—probably adaptable to parts of California.

Leschenaultia is in 18 species, also from Australia. They are low ever-

greens, often with handsome flowers, but almost



Palmerella debilis is a monotypic Californian plant—an example of several plants of the tribe Lobeleiæ found on the Pacific coast. The best of these are often handsome

species are natives. They are well distributed over the world, except that the Eastern Mediterranean region is said to be destitute of them. Several beautiful kinds, including the taller growing plants formerly called *Tupa*, are grown in Europe, but were better done fifty years ago than now. They have a general resemblance to the northern "Cardinal flower," and some are hardy in the south-western states. Then there is a good-looking set with blue or white flowers represented by *L. syphilitica*, with a set of variously colored hybrids, between these and *L. fulgens*. On the mountains of India is *L. nicotinæfolia*, with two-inch wide aucuba-spotted leaves gathered together in a head surmounting a four to six feet high stem, terminated by a two or three feet long spike of dull-colored flowers, the whole, at a distance, having the aspect of an Australian grass-tree. Seeds were sent to the Veitch's of London years ago, with the recommendation to try them for sub-tropical plants. *L. gigantea*, a South American species, grows to 10 or 12 feet high. *L. erinus*, in variety, are familiar to florists. *L. speculum* is the South African annual known as *monopsis*. *L. Dortmanna* is an aquatic found in the British lakes and in New England, northward. It was represented in a leading English catalogue by one of the cuts here reproduced; it is different, however, and grows largely under water.

Downingia, in 4 or 5 species, are the pretty bright blue annuals with white or yellow throats often given the name of the liliaceous *Clintonias*. Three are Californian and the rest Chilian.

The tribe *Cyphieæ* is a small one of 23 or 24 species, divided among 4 genera. Two of these are monotypic California plants, one of which has two or three forms, or, possibly, distinct species.

Wahlenbergia has 80 species scattered over the earth, but most abundantly in South Africa and Asia. *W. hederacea*, *W. serpyllifolia* and some others are often called campanulas.

Platycodon is a monotypic genus from Northern China and Japan. There are two or three forms, chiefly varying in color from blue to white, and also in height.

Codonopsis, in a dozen species, are from North China, Japan and the Himalayas. One or two of the Himalayan species have been found hardy to the Lower Lake regions, and where they succeed are good showy plants.

Cyananthus, in 7 species, and *Campanumæa*, with a similar number, have much the same distribution.

Canarina, in a species or two, are bushy herbs from the Canary Islands which ought to be useful to the Pacific Coast. They have orange or dull yellow flowers, suffused with red nerves and veins.

Phytemna has, possibly, 35 species, but many more described. They are natives of temperate Europe and Asia. Most of the dozen or so in cultivation are European summer bloomers. *P. orbiculare* is a British plant with dense blue heads of flowers.

Campanula has 250 species, all natives of the northern hemisphere. There are about 14 natives of the United States, and one or two naturalized. Their flowers are bright blue or white, or more rarely, pink. They are produced singly, in a



OSTROWSKIA MAGNIFICA.

—From *Garden and Forest*

thryse, or in dense heads, and although well enough known to gardeners, are by no means as commonly seen as they deserve to be. Eighty or more species and varieties are cultivated in the larger European gardens, and the tall growers are useful as single specimens studded over the prostrate growing kinds, which latter are popular as rock-work plants. One or other of the species is in flower during each of the summer months. *C. rhomboidalis*, during May; *C. Carpatica* and the very variable "Blue bells of Scotland" (naturalized in the United States), as also the "Canterbury bells," during June; *C. persicæfolia*,

C. latifolia, *C. pyramidalis* and *C. Trachælium* in variety during July; while *C. pusillæ* flowers during August, and *carpatica* and some others will often give a few flowers as late as September.

Ostrowskia magnifica is a single species from Turkestan, hardy, and with large blue flowers, produced about midsummer.

Trenton, N. J.

James MacPherson.

EARLY FLOWERING BULBOUS AND TUBEROUS PLANTS, I.

There are several early flowering bulbous and tuberous plants, natives of Michigan, worthy of a place in our flower gardens, and yet others that are suitable for planting in parks and larger grounds.

These should have the same treatment as hyacinths, crocus, narcissus, anemones, etc. That is, they should be dug when the bulbs and roots reach maturity after flowering, and should be planted early enough in autumn to become well established, say from May to September according to kind.

Growth as a rule begins early, by sending out many fibrous roots deep into the soil, though a few send stems to the surface late in autumn, but most of them do not show much above the surface until just before the snow disappears in the spring. Some will flourish fairly well if taken up early in the spring, but they should no more be handled in early spring than should tulips, narcissus, crocus, hyacinths, anemones, crown imperials and such like plants. I will now describe several species:

Allium Canadense, Canada Onion, occurs in two forms or species, one with broader glaucous leaves and the other with narrow deep green leaves. This is not recommended for its flowers, but a forest covered with the rich, graceful, foliage of the Canada onion is indeed attractive in appearance. Leaves stand about one foot high, gracefully nodding at top. It should be planted thickly in masses. The bulbs are often eaten in early spring. Two species of broad-leaved alliums occur in south-east Michigan, one with broad lanceolate green leaves with dark red petioles, and the other with narrower and smaller glaucous leaves. The first is probably *allium tricoccum*, the second unknown.

Anemone quinquefolia differs considerably from the European *Anemone Nemorosa*. It grows 3 to 6 inches high with a whorl of three 5-parted leaves, and a solitary flower, rose outside, white inside. Roots are very brittle and difficult to collect or handle. It is a very pretty little plant when planted so thickly as to cover the ground. It thrives in rich, sandy loam and oak shades.

Anemonella thalictroides, the Rue anemone, is also a very pretty flower of early spring, one foot or more high with umbels of white or purplish flowers with leaves resembling those of the columbine (*Aquilegia*). It thrives in rather sandy highland woods, sometimes on steep sunny slopes. Rather scarce in south-east Michigan.

Isopyrum biternatum, the False Meadow Rue, much resembles the one just described, but the flowers are solitary and not in umbels on the ends of the branchlets;

color pure white. More delicate and dainty in appearance, very pretty both in foliage and flowers. It flowers in April and May, in rich low, moist Beech and Maple woods, which become dry after June, never with preceding.

Arisæma triphyllum, Indian turnip, Jack-in-the-Pulpit, with its rich green, trifoliate leaves, and very odd dark purple or green spathe is always interesting even though not noted for its beauty; it is certainly conspicuous.

Arisæma Dracontium the Green Dragon is less well known. It grows 1 or 2 feet high with large 5-parted leaves and an extremely odd green spathe, with the long white spadix extending far beyond it. Its home is in rich river valleys and it flowers in June and July. July or August is the proper time for handling its tubers.

The writer knows of no early spring bulbous or tuberous flower with as handsome foliage as the Squirrel corn, *Bicuculla Canadensis* and Dutchman's Breeches, *B. Cucullaria*, formerly called Dicentras. The Squirrel corn is in my estimation the handsomer, is taller, with more delicate and prettier leaves and besides, the smaller, odd handsome white flowers in long racemes are very fragrant. The Dutchman's Breeches is a lower and coarser plant, with larger, even odder looking white flowers, without fragrance. Both are excellent for cut flowers, for the flower garden, park, or for forcing in winter. Squirrel corn has rich yellow tubers like large grains of corn, the Dutchman's Breeches has reddish tubers. Rich sandy beech woods, are its home and April its flowering time. The stems decay in May.

No native flower makes so brilliant a show in early spring as the Marsh Marigold, *Caltha palustris*, wrongly called "cowslip," and yet it is seldom or never planted. A plant 18 inches high and 2 feet across, bearing great clusters of large brilliant yellow flowers, girdled below with a mass of large rich shining green heartshaped leaves, it is indeed a handsome object. Besides, many varieties occur, some with large, others with small flowers, and not rarely we find the flowers semi-double, and sometimes full double. Certainly it promises well if some florist would take hold of it as has been done with the Ranunculus, etc., no doubt white flowered varieties could be developed. It grows where it is wet in the spring and dry after July 1st., in rich loams mostly in shades. Foliage dies in July.

Three Cardamines flower early in the spring that are worthy of attention. *Cardamine pratensis*, the cuckoo flower, has in cultivation at least in England, full double varieties. Our native variety has single pure white candytuft like flowers. It grows in wet mossy places.

Cardamine purpurea is one of our handsomest early spring flowers, and one of the earliest to bloom. Flowers are in clusters, purple, attractive when growing and pretty in bouquets. It could be forced. It loves rich, cool, shades.

Cardamine rhomboidea blooms about a month later, it has larger pure white flowers, and is found on the banks of streams.

Rochester, Mich.

Wilfred A. Brotherton.

(To be continued.)



CREMATION.

While there has been comparatively little said recently on the subject of Cremation, statistics go to prove that it is making slow but sure progress. The number of crematories is increasing, and new structures are being planned and erected in localities hitherto deemed too conservative to admit of the innovation.

The same may be stated of the condition of the question abroad. The most recent items of interest coming to hand are, that at the meeting of the Town Council of Dundee, Scotland, held early in October the question was raised of establishing a Crematorium in that staid old city by the corporation itself. No effort was made to permanently shelve the matter, but for the time being it was decided to defer it. The Norwegian Parliament has passed an act decreeing that every person over 15 years of age may be cremated after death, if he or she has made a declaration in the presence of two witnesses. For those under 15, a declaration on the part of the parents must be made. The police, medical registrar, and the attending doctors, must also furnish written testimony as to the cause of death before a body can be cremated.

The report of the Council of the Cremation Society of England for 1897 gives the number of cremations at the Crematorium at Woking for 1897 as 173, as compared with 137 for 1896, making the aggregate of cremations at that place over 1,000 since the commencement of operations. Increased activity was shown at Manchester, Glasgow and Liverpool. Over 150 town and district councils, including many of London, have approved of the proposal to apply to Parliament for an amendment to the Burial Acts and Public Health Acts "enabling them to adopt cremation as a permissive method of dealing with the bodies of the dead."

In Paris cremation is being operated on quite a large scale and on a very reasonable tariff of charges. In Germany and Italy cremation is progressing quite noticeably.

In our own country the prejudices against the incineration of the dead are moderating, due in a measure to the favorable opinions expressed by so many eminent clergymen and other public teachers.

It was on Dec. 4, 1885, that the first incineration of a human body took place at the Fresh Pond Crematory of the United States Cremation Company of New York. Since that date between two and three thousand bodies have been cremated.

Crematoria have been established in many large cities and the number is steadily increasing; in fact,

many of our larger cemeteries have found it expedient, from a business standpoint, to provide for this method of caring for the dead, in order to meet the growing sentiment in its favor.

The figures of the North Western Cremation Society, whose Crematory is located in the West Davenport Cemetery, Davenport, Ia., are interesting. The first incineration took place March 3, 1891, and 6 was the number for the year. This figure was increased to 7 in 1892, and to 13 in 1893. In 1894 the number dropped to 8, with the same for 1895; in 1896 there were 9, in 1897 the figure rose to 23, and up to October 15 of this year there have been 15 incinerations.

* * * * *

Many noted men have placed themselves on record in connection with this very important subject.

The late Right Rev. Phillips Brooks wrote: "I believe that there are no true objections to the practice of cremation, and a good many excellent reasons why it should become common."

The late Charles A. Dana expressed himself thus: "It is my judgment that cremation is the most rational and appropriate manner of disposing of the dead."

Prof. Charles Eliot Norton says: "The arguments in support of cremation are so strong, and those against our present fashion of burial are so conclusive, that I have little question that, when they are fairly presented to intelligent men, the development of a sentiment favorable to cremation will be rapid, and the adoption of the practice speedily become familiar."

Rev. Thos. C. Hall: "I do not regard the disposition of the remains of our dead as a religious question at all. It is one of sentiment and hygiene, and I think both sentiment and hygiene would be better subserved by cremation than by our present dangerous and really disgusting practice of burial. The rapid resolving of the poor earthly remains into their constituent elements through the cleansing fire seems to me to be a far more rational and beautiful disposition than the prevailing custom."

Rev. Jenkin Lloyd Jones: "Sanitary and humanitarian considerations will hasten the growth of public intelligence and quicken the poetic sense of fitness and beauty; will bring into our modern life the custom of cremation, which by the help of science and ingenuity has been reduced to a degree of simplicity and poetic effectiveness and beauty that is surprising. A modern crematory stands on the picket line of our advancing civilization, a symbol of the simple manners, the purer faith, and the unaffected sincerity toward which we are tending."

* PARK NOTES. *

The State of Georgia, by a state law has invested the Park and Tree Commission of Savannah with the charge of all public parks, squares, grass-plats, cemeteries and trees in that city, which places the commission in such a position as to give every opportunity for the proper care of the property given to its charge, and offers a scope of procedure in every way favorable to the exercise of mature judgment in the development and care of park and such like city enterprises. The commission has formulated a set of rules and regulations for the general care and government of the parks, squares, grass plats, cemeteries, etc., of the city, and an ordinance has been passed by the city council approving the same, which gives them the effect of a city ordinance.

* * *

A dispatch says that Colonel John S. Cooper, who has recently returned from a trip in northern Minnesota along the upper Mississippi, proposes to organize a movement for the establishment of a new national park in that section of country. The region that he would have set apart by the government comprises about 15,000 square miles of pine lands, dotted with lakes and abounding in fish and game of all kinds. He says that after the lumber is removed the land can be bought for \$1 an acre, and that the government can well afford to preserve the tract for a place of rest. This proposed game preserve extends from the headwaters of the Mississippi north to the Canadian line, and is described as an ideal health resort and place of scenic beauty.

* * *

Prospect Park, Brooklyn, has a building called "The Pride of the Park," designed for the comfort of the bicycle girls. It is a pretty cottage with verandah outside, and within accessories for comfort and rest, with a woman in constant attendance. The plan is unique and so far as is known it has never been tried anywhere else. It was suggested by Timothy L. Woodruff, now lieutenant-governor, a former park commissioner. "Its object is simply to furnish a refuge for women riders far from home, a refuge that they can nowhere else find. The thoroughly nice girl who has torn her frock, hurt herself or who feels a trifle faint, does not want to find shelter in a roadhouse. In the closet of the cottage are sewing materials of all sorts, liniments, arnica, court plaster, soft linen for bandages, ointments and even curling irons and hairpins. All these things the park department provides. It is not a heavy tax upon their resources, the entire expense is trifling, but the comfort to the feminine wheeling fraternity is beyond price."

* * *

In discussing street trees for Pittsburgh, in connection with asphalt paving, Mr. William Falconer, in an interview in the *News*, says: No long-lived tree will live and thrive on an asphalt street. That is if the street and sidewalk are covered tightly with that material. That would leave nothing but a mere little hole in the ground cut through the paving in which to put the tree. Air and moisture are excluded and the only trees which will live under these conditions are not worth planting. No long lived tree will stand it, and no other tree should be put in a street. The only trees that will live when planted in a little hole cut through a pavement are the Carolina poplars and the Ailanthus. They will grow anywhere under any conditions, but no one will plant either of them under any but the worst possible conditions. They are abominable and not for only one reason either. They have but one quality worth considering and that is not considered by persons familiar with the character of the trees. They are rapid growers and that one fact alone is all that accounts for their presence anywhere. And as that quality is so closely surrounded, literally smothered by a

multitude of bad qualities, it is not taken into account in the selection of trees for ornamental purposes.

* * *

In the Park Commissioners report to the Mayor of Boston, the following appears, which is very suggestive in its relation to parks generally: "We propose in future park plantations to use largely the trees and shrubs native to Massachusetts, because these grow here more successfully, live longer, and require less labor to keep them in good condition than the trees and shrubs of foreign countries. More natural and therefore more artistic results can be obtained by the use of the native flora, than by a promiscuous mingling together of the plants of the different parts of the world; and such a selection we believe, moreover, will have the effect of reducing very materially, the future cost of keeping the park plantations in a healthy and satisfactory condition, especially if the plantations are made in the first place, as we propose to make them in a thorough manner. In Franklin Park, especially, natural woods, glades and meadows, which should be its essential features, can be reproduced, as far as it is possible for art to reproduce nature, by employing only such plants as nature herself, undisturbed by man, uses in this part of the country."

* * *

The following extract from the New Haven, Conn., *Register* offers a text worthy of deep consideration by the great majority of small towns in the country. "Commenting on the desirability of parks as additions to the attractiveness of small towns, the Providence *Journal* regrets that the early settlers of "Little Rhody" did not do as much for posterity as those of certain other States, notably Connecticut. All through our State, it observes, commons and greens may be seen in the center of the little towns. The typical Connecticut village has its park or open square, or is built along an extended street, so generous in its width and so beautifully shaded by graceful elm trees that a park-like effect is obtained. Plainfield, Enfield, Litchfield, Colchester, Sharon and scores of other communities enjoy today the fruits of the wise forethought of their founders."

* * *

Mr. William Falconer, in his report on the Phipps conservatories and Schenley Park, given in the Annual Report of the Department of Public Works, Pittsburgh, for 1897, speaks of an educational feature developed in connection with the conservatories: "Repeatedly teachers in our schools have brought their classes out to the greenhouses to give the pupils an opportunity to study the living plants, and when such could be spared we have contributed some fern fronds and blossoms to pupils for class work in school. During the Chrysanthemum exhibition several of the teachers in the public schools sent their classes to the conservatory to write a composition on the chrysanthemum. This is particularly gratifying, for it is our ambition to make this great garden the botanical centre of the Iron Metropolis as well as a beautiful recreation ground." The magnitude of the nursery garden in Schenley Park may be gathered from the following extract from the same report: "It consists of about fourteen acres devoted to the propagation and cultivation of young trees, shrubs, vines, perennials, etc., for use in the permanent plantations of the park; in it are also tested all new hardy plants that are received. It now contains 3,742 deciduous trees, 951 coniferous trees, 32,896 deciduous shrubs, 952 evergreen shrubs, 13,770 vines, 1,735 garden roses, 4,987 wild roses, 2,000 hardy cacti and 40,162 hardy perennials. This vast variety of plants yield a most interesting assortment of blossoms all summer, and everything being conspicuously named, botanists, florists, gardeners, and others spend much time in studying the plants. We are gathering the nucleus of a good botanical collection of plants, and have now eleven distinct species of sunflower, eighteen of golden rod, twenty-four of perennial asters, and so on, besides scores of varieties of such plants as iris, paeonia, phlox, etc.

CEMETERY NOTES

Mr. Warren J. Wilder has bequeathed to the town of Guilford centre, Vt., \$2,000, the interest to be used to improve or care for the cemeteries in the town.

* * *

The Moosup, Conn., Cemetery Association has decided to build a Receiving Vault in the Union cemetery. It will be a side hill vault with granite front, the body covered with a brick arch. Its dimensions will be length 17 feet, width 10 feet and height 8 feet. It will have a capacity of 20 bodies.

* * . *

A legal question on the rights of parents in the bodies of buried children has been determined by an entry recently made in the Circuit Court from the Ohio Supreme Court, which compels the directors of St. Mary's Cemetery Association of Cincinnati, to deliver to A. Sonnentag, the dead bodies of his two children. This case seems to establish a precedent. Sonnentag's children were raised and died in the Catholic faith. They were buried in St. Mary's cemetery. Sonnentag was said to have experienced a change of religion. He desired to remove the corpses to Protestant ground. His request was refused by the cemetery directors on the ground that he had no right to take the bodies from ground which was consecrated to their interment.

* * *

One of the institutions of Italy which always strikes the traveler as a quaint bit from the middle ages is the Misericordia society which cares for the sick and buries the dead gratuitously. The members are not monks but citizens usually from the higher ranks and for 400 years the people of Tuscany have seen these processions of ten or twelve men in black calico dominoes, black wide-awakes and black masks carrying a coffin on a litter. When the procession occurs at night the silence of the men, the weird flare of the torches and the crucifix borne before make a scene never forgotten. It is a work of charity but there is always a long waiting list of applicants for membership. The stroke of a bell calls the members to the place where gowns and litters are kept, signifying their help is needed, and they respond with the alacrity of firemen in a country town in this land.

* * *

A step in the right direction has been taken in Brockton, Mass., by the council passing an amendment to the city ordinances relative to Melrose cemetery. The amendment provided that the committee on burial grounds should, with the approval of the city council, make such rules as were deemed desirable for the governing of the cemetery; that it should appoint a superintendent annually, fixing the salary to be paid him, and that no monuments or headstones should be erected without a suitable foundation, and subject to the approval of the superintendent. As a matter of fact all of these conditions are provided for in a set of rules prepared and published by the committee on burial grounds in 1891, but in the absence of any ordinance bearing upon the subjects, none of them can be enforced. It was the idea of the committee on ordinances to have the rules embodied in the ordinances where they would have some standing.

* * *

The annual report to the Directors of the Cemetery of Spring Grove, Cincinnati, O., for the fiscal year ending September 30, 1898, has been submitted. The total receipts including balance of \$2,900.76 from last year were \$140,487.06 Among these receipts are: Sales of lots, \$73,838.30; Interments, foundations, single graves, \$22,504.35; Improving lots, \$9,163.85;

From trust fund for perpetual care of lots, \$6,407.80. The total expenditures were \$115,641.43, which include: Labor and material \$31,543.24; Interments and foundations \$7,729.64; Fuel and feed \$1,630.34; Repair and supplies, \$1,862.573. There were 108 lots and 12 fractions sold of an area of 65,487 square, feet, and 61 vault and 1363 burial permits were issued. There are 12,121 single graves occupied and the total number of interments to date amounts to 62,400; 581 grave marks and 69 monuments were set during the year. The number of lot holders has reached 9,917.

* * *

Superintendent C. S. Bell of the Lexington cemetery, Lexington, Ky., spent considerable time recently in digging around the monument of S. D. McCullough, as the result of the publication of a story in Cincinnati detailing how an unknown convict in the Kentucky penitentiary had told how he had secured \$5,000 worth of diamonds by robbery, and had buried them in a graveyard near Lexington and by the side of a monument on which was the inscription, "As Moses lifted up the serpent in the wilderness." No monument in Kentucky contains this peculiar inscription save that of McCullough, and the officials fearing someone, tempted by the prospect of securing a large number of diamonds, would injure the monument, held a meeting and ordered Mr. Bell to make a careful examination around the monument for the gems. He kept a force of hands at work several hours, and they dug the ground for a radius of eight feet around the monument, but found no diamonds.—*Kansas City Star*.

* * *

The Rev. Dr. J. H. Townsend, Tunbridge Wells, England, in a letter to *The Undertakers Journal*, strongly advises of the danger of leaving the remains of relatives or friends in Swiss cemeteries. His own experience, which appears to be that of others, has been very bitter. Thirty-four years ago, he lost a brother by a fall from an Alpine precipice, who was buried in Territet. His father purchased the grave and erected thereon a beautiful memorial, and the family and friends periodically visited the endeared spot. A few years ago a gentleman friend visiting the cemetery reported to Dr. Townsend that the municipal authorities needing another cemetery, and not desiring to purchase more property, had leveled and destroyed the monuments and tombstones and had covered the place with earth of sufficient depth to permit of new burials over the old cemetery. Neither lawyers nor the British government could change matter either by way of remedy or recompense, the Swiss government claiming to be unable to influence the local authorities. Similar cases are reported elsewhere and it is clear that the conscience of the much lauded Swiss people is not very tender on the question of inviolability of the grave.

* * *

The War Tax on Cemetery Deeds.

Considerable enquiry has been made concerning a proper understanding of the stamp duties appertaining to cemetery deeds. Many of the printed statements coming to our notice have been not only misleading but contradictory, and in order to make the matter clear, an explanation was requested from the authorities at Washington. The following reply has been received through the collector of International Revenue in Chicago:

"Where deeds to cemetery lots are so worded as to grant, assign or convey to the grantees, the title in fee simple to said lots they require stamps, provided the value or consideration exceeds one hundred dollars. If, however, the deed does not grant, assign or convey to the purchasers any lands, tenements or other realty, but only the right of burial in the lot named, to erect monuments thereon, etc., it requires no stamps."

CORRESPONDENCE.

Formal Gardening.

NEW YORK CITY, Nov. 5, 1898.

Editor Park and Cemetery:

DEAR SIR:—As a subscriber to and constant reader of your valuable and interesting paper, to which, since the untimely decease of *Garden and Forest* we have alone to look for a better standard in the arts of which it treats, I was grieved to see in a leader in the current issue a capens calami which is calculated to mislead many.

Surely, in the editorial on the first page which occupies the greater portion of the second column, you must have intended to write "Carpet Bedding" instead of "Formal Gardening."

No one who is familiar with the splendid Formal Gardens of Italy and England could imagine that the Art which created them sympathized with or countenanced the "curiosities in flower beds" or the "heterogeneous nondescripts" you so justly censure.

No doubt you can find here and there an instance of topiary extravagance or over elaborated parterre which would give color to your strictures of the Art, but as a practitioner of the noble and ancient craft of Formal Gardening, I most respectfully protest against its being held responsible for the eccentricities of the ignorant and tasteless Carpet bedding. All that we maintain is, that those portions of the garden which come into direct juxtaposition with the house or other buildings should be disposed—planned in a formal and orderly manner, believing that such a disposition harmonizes better with the Architecture it frames and should adorn than the informal so-called "Landscape style." Messrs. Blomfield and Thomas' "Formal Garden in England" lays down the principles of our craft clearly, if somewhat disputatiously.

When the garden has been planned formally, and in a style of Architecture consonant with that of the building, the more informal the planting of flowers the better the effect.

This is provable by a glance at such gardens as the Villa Lante in Italy, or those of Holland House, Hatfield or Montacute in England, not to mention a host of others in both countries.

Tusting that you may feel disposed to make some public amendment of this lapse, I remain, respectfully,

E. Hamilton Bell.

We are very glad to receive Mr. Bell's suggestive communication and to note his views on Formal Gardening. We have to say however that the editorial in question dealt solely with gardening in the Parks without reference to whatever modifications might be desirable in connection with the architectural features. Perhaps the use of the term "formal gardening" in place of "carpet bedding" was taken in too broad a sense by our correspondent.—[EDS.]

* * *

Planting Station Grounds.

SMITH'S GROVE, Ky., Nov. 8, 1898.

Editor Park and Cemetery:

DEAR SIR:—Of late years it is encouraging to a true lover of horticulture to notice the growing tendency of our railroad companies in planting and beautifying their grounds adjacent to the tracks and depots. Nothing more pleases and rests the eye of a weary passenger than to view from his window some unique design executed by a tasteful gardener, and nothing is a better advertising card for the company than to present him with such an unusual luxury. These grounds must all have at-

tention, any way, and to have them sodded or laid off into a few geometrical walks and flower beds, will, from a business standpoint, require but one point more to keep them up than it will to keep down the briars, bushes and weeds that are usually prevalent in such places. The railroad companies are beginning to realize this, as well as the pleasure the neat, artistic appearance affords an appreciative traveling public, and some of them have taken very commendable steps to carry it out. Flower loving people everywhere should heartily endorse and encourage this, for there are millions of unoccupied acres that might be brought out thus by people who are able to afford it and who are willing to do it upon due solicitation. Our papers should urge and encourage this work, and individuals everywhere mention it occasionally to the railroad officials.

Geo. B. Moulder.

* * *

Elodea Canadensis—Leaves.

OAK GROVE CEMETERY, DELAWARE, O., Nov. 3, 1898.

Editor Park and Cemetery,

DEAR SIR:—I note that a number of superintendents have been troubled with Elodea Canadensis. Through our cemetery we have a chain of lakes in a ravine running through the grounds, and we found that since we began to keep some geese and common ducks on the waters, we have had no trouble, whereas before that time we could not keep the weed under control. We were bothered continually with it. I found also that common geese and ducks were better for that purpose than fancy breeds.

On the subject of what shall we do with our leaves, I would say that Oak Grove Cemetery is what may be called a forest cemetery. Every year for ten years past we have been thinning out the trees as fast as we could overcome the prejudices of the people, but four years ago we bought fifty additional acres, and since that time we haul all the leaves on to that ground and plough them in and farm it with good results.

David Grinton.

A Plantation Graveyard.

A writer in the *Baptist Courier* thus describes a negro burial scene in the plantation graveyard of ante-bellum days:

The plantation graveyard lay on the sloping edge of a gentle hill that led down to the creek that flowed below. Big oaks afforded a beautiful shade. The place was quiet and secluded, shut in by a rail fence.

In an autumn month there was a death in the plantation. An old negro, a very old negro, was dead, and my father and I went out to the burial. They laid him away with the others who had gone out from the "quarter." On reaching the grave the negro women stood to one side under the trees, clad in homespun frocks and wearing large headcloths artistically about their heads. The only burial service was a prayer made by an old negro man in a most pious, singing tone, and as the corpse was being lowered into the grave the man who stood there to receive and guide the coffin said: "Han' him down gentle, boys! His bones is ole!" When the grave was being filled up each negro present, including the women and children, cast a handful of earth upon the coffin, and some of them threw in also green twigs plucked from the oak bushes around. The grave having been filled and rounded over, the procession of mourners turned away, one by one, and gathered at the fence. By and by the praying man joined them, and as they slowly walked away he lined out a hymn, the sweet echoes of which are now coming back to me through all these dead and buried years—

"And must this body die,
This mortal frame decay?
And must these active limbs of mine
Lie moldering in the clay?"

Selected Notes and Extracts.

Judicious Grouping of Trees and Shrubs.

The degree of competency in a landscape gardener shows out in many ways, one of which is in his arrangement of trees and shrubs, individually and collectively, both for immediate and permanent effect. My advice to anyone who anticipates entering largely into landscape work, even though it be confined to moderate-sized local residential places, would be to make close observations of the habits and character of growth of various things, noting their effect on the surroundings, and also comparing the thrift of certain trees in various locations. If a man thoroughly knows what he is about, his services are always in demand. On visits, occasionally, to large estates, I am frequently surprised at the lack of judgment in arrangement of groups. For instance, I recall a bed, of magnificent proportions, of hardy grasses. In the centre was a splendid clump of *Arundo donax variegata*, around it was *Eulalia japonica zebra*, followed by *Eulalia* var. *variegata univittata*. To me, the bed was a failure because it lacked sufficient green, which a circle of *Eulalia* var. *gracillima univittata* would have supplied between the second and third named. On the same lawn was a bed composed of purple-leaved shrubs, principally, and each plant, individually attractive, was rendered valueless by lack of harmony of color. On another place I saw a group of three Japanese maples. They were planted about six feet apart, the intention being to form a good-sized mass of foliage at that spot. The intention was good, but the effect bad because of the use of three kinds having a disparity of growth; they were the common green-leaved type, its blood-leaved variety and the golden-leaved. The combined color effect may be all right, but the misshapen mass was not. Had they been set fifteen feet apart, and the weaker-growing golden variety put forward, the effect would be different. Right here, it may be well to note that variegation in leaves is a sign of weakness. Not necessarily an unhealthy weakness, but a plant inheriting this character must be counted on as comparatively dwarfed, and always kept to the front in groups.—*S. Mendelson Meehan in Florist's Exchange.*

Hop-Covered Archways.

Few things have a more elegant appearance as a covering for garden archways than the common Hop. A capital temporary arch may be made over a grass or gravel walk by planting on each side a

stool of Hop roots, then taking about eight long limp Ash rods, sharpening the stout ends, and inserting them securely into the soil, four on each side, bending them over until they meet, then tying them together, fixing a few cross pieces of wood to hold the poles in position. The Hop growth quickly covers them. The arch can be taken down for the winter as soon as the haulm dies down. Wire arches are often met with partly covered with roses and other things. These when bare of foliage during winter are anything but ornamental even in a Kitchen garden.—*J. C. in The Garden.*

A Troublesome Weed.

Among weeds increasingly complained of is the field bindweed or small flowered morning glory. This is mentioned in the Ohio experiment station Weed Manual as a somewhat recently imported pest of the most serious sort from Europe. Its small flowers, an inch or less in diameter at the top, are certain characters of recognition. It grows with stems several feet in length, twining about themselves or about any other plants which may happen to be near. Underground it has extensive stems, any piece of which may start a new plant, and by this means it spreads year by year or is scattered by cultivating through the infested patches.

The eradication of the field bindweed is a very difficult task, yet as with Canada thistle nothing short of eradication when found in small areas will serve the purpose of the landowner. A liberal use of hoe and salt would seem the best means of destroying it. True, other vegetation will chiefly be destroyed, but this may be endured for a time if the bindweed is also exterminated. The work should begin on the outer fringes of the patches and let nothing escape there. The infested spots should not be cultivated with the surrounding land because of dragging the roots on the plow and tools.—*Michigan Fruit Grower.*

Care of Climbing Roses.

In the case of climbing or running or pillar roses the end desired is as great an amount of bloom as the plants are capable of bearing. Such plants are, as a rule, strong growers, and if the soil fertility is kept up they are capable of producing an immense number of good blooms. Perfection of form and large size of bloom is not a direct object, as in the case of hybrid perpetuals, hybrid teas and tea roses, where close pruning is resorted to to attain such results. Knowing the plant to be of a vigorous variety, and in good condition, as shown by the growth of wood of the previous year, it is safe to assume that it will be able to carry nearly as much bloom

as can set on the strong canes and shoots of the last year's growth. It is always to be understood that the soil fertility is maintained in the highest condition by the use of stable manure or artificial fertilizers. The essential pruning, therefore, of climbing roses, in the condition mentioned, consists in shortening in the long canes by removing some of the smaller growth at their tips, which was made late in the season, and also shortening in the last year's growth from the older canes, allowing as many buds to each shoot as, in the judgment of the pruner, may be well developed the coming season.—*New England Farmer.*

Making Cement Pipes in Situ.

A novel sort of pipe for water or drainage purposes, recently invented by a Frenchman, is noteworthy. A trench is dug in the ground where the pipe is required to be laid, and is partly filled in with good cement. Upon this soft substratum is laid a rubber tube covered with canvas, and tightly inflated with air. The trench is now filled up with cement, so that the tube is completely covered with an inch or more of the plastic material. As soon as the cement sets the air is let out of the tube, and it is easily extracted from the pipe, of which it for a time formed the core. The tube can then be again inflated to serve for a fresh section of the pipe, which can be as much as six inches in diameter if required. It is said that a cement pipe of this thickness has been successfully laid by the new method at a cost of about one shilling per yard.—*Journal of the R. I. B. A.*

Night-Blooming Cactus.

The only true night-blooming cactus, especially so-called, is the *cereus grandiflorus*. This last long specific name implies its beauty and grandeur. It is one of the most delightfully scented of all the cactus family, blooming, as noted, at night. A large plant, covered with blossoms, is a sight of beauty once seen that is never to be forgotten. The round stems have numerous small angles on them and are covered with delicate spines. These stems are usually about as thick as one's finger. Of late years another member of the cactus family has usurped the name of night-blooming. This is *phyllocactus latifrons*. It is one of the broad, flat-leaved kinds, and is so readily propagated that it has now become common. It has a long tube to the flower, which curves downward like a siphon. It does bloom at night, and in one sense is night-blooming; but it bears no comparison in any respect with the original night-blooming cactus.—*Mechan's Monthly.*

Association of American Cemetery Superintendents.

ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., President.
WM. STONE, "Pine Grove," Lynn, Mass., Vice-President.
F. EURICH, Woodward Lawn, Detroit, Mich.
Secretary and Treasurer.

The Thirteenth Annual Convention will be held at New Haven, Conn.

The American Park and Out-Door Art Association.

CHARLES M. LORING, Minneapolis, Minn.
President.
WARREN H. MANNING, Tremont Building, Boston, Mass.
Secretary.
E. B. HASKELL, Boston, Treasurer.

The next meeting of the Association will be held at Detroit, Mich.

Publishers' Department

Park Commissioners and Cemetery Trustees are requested to send us copies of their reports.

Photographs and descriptive sketches of interesting features in parks and cemeteries are solicited from our readers.

Notice to Cemetery Officials.

The publication "Modern Cemeteries" in book form is now ready, and those who had ordered copies should have received them by this time. An acknowledgement of the receipt will be appreciated.

It is to be hoped that this book will be ordered freely as it contains valuable information on cemetery development and management.

Copies will be mailed to any address at 50 cents; please remit with order.

Frank Eurich, Sec'y and Treas., 604 Union Trust, Detroit, Mich.

Personal.

William Salway, so long and favorably known as the superintendent of the cemetery of Spring Grove, Cincinnati, O., has now practically retired from the duties of the position and is succeeded by his son Mr. Fred Salway. Mr. Salway's long connection with this cemetery has made his name a "household word" among cemetery officials, and the high order of landscape work he has maintained and continued in these beautiful grounds places his name high among those who have enriched the country in this line of work. His son, who has worked under him for years, may be confidently expected to follow in his father's footsteps. Mr. Salway will remain with the Cemetery Association, relieved of the heavier responsibilities he has carried so long.

Lindsay J. Wells.

In the decease of Lindsay J. Wells, the late general superintendent of Greenwood cemetery, Brooklyn, N. Y., one of the most accomplished men in the calling is taken away. He was born in Dublin, Ireland, of English and Scotch parentage, Dec. 2, 1822, and after a thorough education, in which he was fitted for the profession of Civil Engineering and a few years of practice in his profession, he came to

America in 1848 and secured employment as Civil Engineer and Surveyor in Greenwood cemetery. In its service the remainder of his life was passed, a period of 50 years, and from 1883 to 1892 he was general superintendent. After the latter date his health began to fail and he was retired to lighter service. He died on Sept. 5th, last, after years of constant suffering, and closed an exemplary Christian life. During the last years of his life, despite the painful illness he was suffering from, he prepared for the cemetery two large official Register maps drawn to a scale of 40 feet to the inch, each being a work of great detail, showing the 30,000 lots and the numerous avenues, paths, vaults, etc., covering the 475 acres within the cemetery enclosure, all plotted with rare technical skill, and which, being completed just before his death was aptly called by a friend a "monument to his ability."

Mrs. Emily Cobean, secretary of the Delavan Cemetery Association, Delavan, Ill., is desirous of obtaining suggestions for an emblematic design that in connection with flowers might be used at funerals of members of the Association. If any of our readers know of some appropriate design Mrs. Cobean will be greatly obliged if they will communicate with her at above address.

We take pleasure in acknowledging the receipt of an invitation to the Ninth Annual Banquet of the Missouri Botanical Garden to the Florists, Nurserymen and Market Gardeners. The banquet was held at the Mercantile Club, St. Louis, on the evening of November 19, 1898. It will perhaps be remembered that the late Mr. Shaw, when he bequeathed his magnificent garden to the people with the means to ensure its growth and preservation, he desired that the above banquet should be an annual occurrence, to aid in promoting mutual good will and helpful interchange of ideas among those interested in gardening and botany.

The Hebrew Cemetery of the Dispersed of Judah at New Orleans has a woman sexton, the only one we know of except that it is reported that a woman holds such a position at Lewes, England. Mrs. Elizabeth Donnell Mabel is the sexton of the New Orleans cemetery above mentioned, and was appointed to the office after the death of her husband, the former sexton, last year. During a long illness, this wife had attended so thoroughly to her husband's duties, that at his demise, the large majority of the trustees voted to retain the wife as sexton, and it was so arranged. She lives with her small family in a neat cottage at the rear of the grounds and appears to be giving entire satisfaction, fulfilling the various duties promptly and efficiently.

The 38th Annual Meeting of the Indiana Horticultural Society will be held in Indianapolis, Ind., December 6-8, 1898. An interesting and instructive program has been arranged. Among the papers to be read are: Report of Committee on Selection of Site for Experimental Orchard; Plant Growing with Commercial Fertilizers, Mr. Stuart, Lafayette; An Enlarged Forest Area, A Necessity to the State, J. P. Brown, Connersville; Should

Forestry be Made a Part of the Courses of Instruction in our Agricultural Colleges? Prof. B. E. Farnow, Ithaca, N. Y.; The Relation of Forests to Droughts and Floods, Prof. W. R. Lazenby, Columbus, O.; Experimental Horticulture, Prof. John Craig, Ames, Ia. There will be a flower and fruit show for which premiums are offered.

We should like to see the question taken up, which has been before suggested, of listing the most available trees and shrubs native to Indiana, which might be successfully used in street, park and cemetery planting, with particulars of character, habit and possibilities.

California is preparing to establish an experiment station and school of instruction in the grafting and planting of vines.

The Horticultural Society of Southern Illinois holds its annual meeting at Vandalia, Ill., Nov. 29-30 to Dec. 1st.

RECEIVED.

Program and Premium List of 38th Annual Meeting of the Indiana Horticultural Society, to be held in Indianapolis, Ind., December 6-8, 1898.

Botanical Society of America. The origin of Gymnosperms and the Seed Habit. By John M. Coulter, Ph. D., University of Chicago.

The Western New York Horticultural Society. Proceedings of the Forty-third Annual Meeting, held at Rochester, N. Y., January 26-27, 1898.

Prospect Hill Cemetery, Omaha, Neb., By-Laws, Rules and Regulations.

Charter, Rules regulating Lots and Rules for visitors of the Lexington Cemetery Co., Lexington, Ky., 1898.

MAINE AGRICULTURAL EXPERIMENT STATION, UNIVERSITY OF MAINE. Bulletin No. 45, October 1898. Fertilizer Inspection. This is the second of the Bulletins on the Inspection of Fertilizers for 1898. The bulletin issued in March contained the analyses of the samples received from the manufacturers. The present bulletin contains the analyses of the samples collected in the open market by the inspector.

Annual Report of the Department of Public Works, City of Pittsburgh, 1897.

Annual Report of Forest Park Cemetery, Troy, N. Y., together with a number of photographs, maps, etc., of grounds. Copiously illustrated with half tones.

"Tenochtitlan: Its Site Identified." Paper presented to the Archaeological Institute of America, by Rev. Arthur Howard Noll.

Souvenir of the Phipps Conservatory, Schenley Park, on the occasion of the 27th Triennial Conclave, Pittsburgh, Pa., Oct. 10-15, 1898.

Revised List of Premiums offered by the Horticultural Society of Chicago, to be awarded at the Annual Fall Exhibition, Chicago, Nov. 8-12, 1898.

From David Grinton, Supt., of Oak Grove cemetery, Delaware, O., photographs of choice views in that cemetery.

PARK AND CEMETERY.

Devoted to Art Out-of-Doors,—Parks, Cemeteries, Town and Village Improvements.

R. J. HAIGHT, Publisher,
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CONTENTS.

EDITORIAL—PARKS AND POLITICS—THE RURAL CEMETERY—THE DESTRUCTION OF TREES—THE LAWN PLAN.....	189-190
PROTECTING TENDER TREES AND SHRUBS IN WINTER.....	191
SHRUBS AND TREES FOR PARKS.....	192
*FANCY LEAVED CALADIUMS.....	192
*LANDSDOWNE RAVINE, FAIRMOUNT PARK, PHILADELPHIA.....	193
*KRUG PARK, ST. JOSEPH, MO.....	194
*THE CHALEL, RIVERSIDE CEMETERY, CLEVELAND, O.....	195
*MAIN ENTRANCE CROWN HILL CEMETERY, INDIANAPOLIS, IND.....	196
*VICTORIA REGIA.....	196
EARLY FLOWERING BULBOUS AND TUBEROUS PLANTS, II.....	199
*ROYAL BOTANIC GARDENS, KEW, ENGLAND, VIII.....	200
*GARDEN PLANTS—THEIR GEOGRAPHY, XXXVI.....	202
PARK NOTES.....	204
CEMETERY NOTES.....	205
LEGAL.....	206
SELECTED NOTES AND EXTRACTS.....	207
PUBLISHER'S DEPARTMENT.....	208

*Illustrated.

IN the park report of Cincinnati, recently issued, Mr. Warder, the superintendent, touches a note in regard to park ethics, which has not been given the decisive touch that it deserves from the people—politics in park matters. The report says in so many words, that wherever appointments have been made in park work, in any of its departments, based on political fitness, they have been disastrous to the park interests. It does not take much thinking to agree with this, or to understand it. From the standpoint of the laborer, work in the park is distinct in its nature. No man used to sweeping streets, digging trenches, carrying bricks, or doing an ordinary laborer's work is fit to be intrusted with park labor without training, and the more intelligent that man is the better for the park and himself. A park laborer should have some

knowledge of the trees and plants he has to deal with, their habits and requirements, and presuming that attention to his duties has led him to acquire this knowledge, no political necessities should interfere with his job. And the same idea, modified to suit circumstances, attaches itself to the park official list generally. We have had some extraordinary misfits in park official life, due to the political fashions of the time, and the people should see to it, that park work is divorced from such evil influences.

TO those in earnest on the subject of improving the country cemetery, it is a source of great disappointment that so little attention is given to the question, considering the efforts now constantly made to modify the neglect that has hitherto governed the rural graveyard. While the agitation has been widespread, and taken as a whole, the number of small cemeteries receiving better care by reason of it, remarkable, considering the difficulty of impressing upon the smaller communities the advantages of improvement, the number of existing cemeteries practically neglected is astonishing. Looking at the strides made in general progress in a large measure due to the press, how it is that the agricultural papers have not realized the importance of urging the care of the cemetery as a matter of communal education? And then the clergy have been remiss in their lack of effort to stimulate consideration for the burial ground. It is quite true that some funds and considerable care is constantly required to keep the grounds in order, but from the fact that the burial ground is an acknowledged criterion of the enlightenment of a community, these items should be included in the category of civic duties. Looking at conditions as they exist at present it would seem that a combination of contiguous communities to secure a central cemetery, would lead to better results. By apportioning the expenses they would become less onerous and a superintendent could be engaged the year round. This would ensure orderly and well kept grounds, which would be far more satisfactory and attractive, and being so would readily become, to a large extent, self supporting. This idea is entirely overlooked in the county cemetery. Another view, which might redound to better conditions,

would be the organization of county cemeteries, and in this, there should be no difficulty in maintaining a regular attendant. The old adage of what is everybody's business is nobody's business, has a more than ordinarily evil application to the country cemetery, and every interested reader is urged to use his influence to inaugurate reform in this truly desirable direction.

TH E CUTTING down of fine trees in Clifton Park, Baltimore, to make way for new drives, has raised a storm of protest from the tree lovers of that city, who in their stress of regret, declare the spoliation unnecessary. Whether this be true or not, it is very gratifying to note the growing regard for the trees, and that a sentiment is establishing itself, powerful enough to demand attention from the authorities, who either through ignorance or incompetence, so often outrage the feelings of a community in regard to this really important matter. The tree question has become so prominent in the country, due to the reckless destruction of the past, that in both views of it, whether its usefulness or pleasure giving attributes, it is one that has enlisted very strong support. The tree planting associations of Brooklyn and New York have been doing very effective work both in protecting existing trees and inducing their planting wherever appropriate, besides making municipal ordinances touching the subject operative and inspiring. But all this work suggests the necessity of the appointment of a forester in all cities and communities of importance. Not a political henchman, but a man thoroughly educated in forestry, up to his work, fearless and independent. It is unnecessary to say that such a man should possess judgment, his knowledge of tree life should be his certificate, and the confidence of the people would be with him.

TH E MORE we study and practice the lawn plan, as it should be conducted, in our cemeteries, the broader does its scope become, and the more far-reaching its effects. And to look at even what our best cemeteries have done and are doing only serves to draw attention to what is not being done. What is the predominant idea connected with the lawn plan? Is it not to secure picturesque landscape effects, and thus by infusing beauty and harmony into its related parts, to ensure as far as possible permanency. A cemetery conducted on the understanding that its sections should be nothing but well trimmed lawns can hardly be imagined, certainly not with pleasure. And it is needless to attempt to justify the meaning of the term, but more opportunely to note what the lawn plan demands to carry out its perfect in-

tent. In this regard it may be at once stated that those who have the practical management of lawn plan cemeteries should be men well versed in landscape work, that is in creating natural scenery in its broad meaning, by the proper arrangement of the planting schemes, and in the knowledge and use of the planting material, to the end that the happiest effects may be produced, and extended through the seasons from year to year. That the efforts thus far displayed have resulted in gigantic strides in improvement cannot be gainsaid, and it would seem that the snags now impeding the current lie in the channels of inoperative restrictions—inoperative from the fact of their not being sufficiently advanced in their restrictiveness to secure harmonious relations with the landscape work. And, again, there is the lack of sympathetic appreciation of the lot holder, who not seeing the force of the landscape demands, objects to what appears the arbitrary rules relating to their property rights. And here this condition of things leads to a word on the duty of the lot holder towards the lawn plan, which by the way also contains a very strong educational principle. The best effects of the lawn plan demand a minimum of stone work to avoid diverting the attention, so that in certain respects the fewer the monuments the better. This is a general principle. Then to further relieve the monotony, which must more or less assert itself in relation to the monuments, diversity of design is a matter of paramount importance. A proper realization of these essential requirements of the lawn plan will suggest to the broad-minded lot holder that exclusiveness in the new order of cemetery work is a thing of the past, and that a lot is not held as a piece of personal property upon which to work one's will, but a component part of the whole cemetery, wherein all have a general interest, and to whose individual welfare, as a reaction, the entire cemetery contributes, by its increasing attractiveness and restful beauty. These points and their amplification being understood by the officials of the cemetery, it follows that the lot holder should be instructed to the end that his understanding should coincide with theirs, and the more efficiently and quickly this is attempted, the better. There would appear to be no better way of doing this than by supplying the lot holders with such literature as bears directly on the subject. This would be a paying investment on the part of cemetery management. Attendance at the annual meetings of the association of cemetery superintendents, the reading of papers there, and the incorporation of these papers in the printed proceedings of the cemetery associations would wonderfully help the development of the lawn plan on its highest plane.

PROTECTING TENDER TREES AND SHRUBS IN WINTER.

The proper protection of partly tender trees, shrubs and plants in the winter season is a subject interesting to every one that has to care for such subjects. There is much to be learned in regard to this, even by those among us who have had a life-long experience. It astonishes me to find out how many more trees and shrubs are hardy than I knew of years ago. And to-day many a friend is doubtful of the hardiness of many things which I can show him growing here, where they have been for several winters. As I write there comes to mind the glorious evergreen Magnolia of the south, *Magnolia grandiflora*, the English holly, *Ilex aquifolia*, the crape Myrtle, Pomegranate, *Abelia rupestris*, *Ligustrum Japonicum*, *Aucuba Japonica*, *Cunninghamia sinensis*, and *Azalea indica alba*, as among many others which are classed as too tender for here, and which are rarely seen, yet I could show them out of doors in winter to any one who wished to see them. Then there are many conifers which thrive well when properly cared for. As I write *Cryptomeria Japonica* and *Cupressus Lausioniana* come to mind, as well as the Deodar, Lebanon and Mt. Atlas cedars.

Taking the *Magnolia grandiflora* and *Aucuba Japonica* as illustrations, let it be borne in mind that what they need in winter is protection from the sun, chiefly; and secondly, from high winds. These plants, and many similar ones, do not concern themselves, so to speak, about the mercury in the thermometer. What they want is darkness. Kept well in the shade and free from winds is half the battle. The other half is the keeping of the roots in unfrozen soil, by the aid of a good covering of forest leaves. With all evergreens the source of danger lies in great light, causing excessive transpiration. Add to this roots in frozen soil, unable to supply what the foliage is losing, and we have the source of winter killing of evergreens.

Two years ago I tried an experiment on a *Magnolia grandiflora*, which will be of interest to relate. The southern and western sides were shielded from the sun by arbor-vita branches secured about them, but the northern side was left entirely exposed. When spring came and all were uncovered the northern side was the most perfect of all. As an additional proof that it is the sun which does the harm is the fact that no matter how cold it is before January, the evergreens spoken of are never injured when not protected. As a fact, I never cover until after New Year's, when the strengthening heat and light admonishes me to do it. At the present writing, Dec. 10th, not a thing is covered, save the figs, which are buried a few inches under ground.

The rhododendron is a plant often greatly mismanaged. I have often seen screens erected on their northern side to break the wind, while no mulching or shading of the foliage had been thought of. The first thing to have been done should have been the mulching, to keep frost from the roots. The second thing, the placing of leaves or something over the foliage to keep out the sun and light; the screen on the north side, the third move. The preservation of plants in this way is on the same plan as that followed by the gardener who thaws out his frozen house plants by placing them in a low temperature and in the dark. Keep the light away, and many a nice plant can be added to the outside list. High winds dry out evergreens badly, hence shelter from gales is of great importance, as is unfrozen ground, that roots may continue active. Dry soil in winter is unfavorable to trees spoken of. Good rains before winter are helpful, indeed necessary, that the roots may easily find that which they will surely have great calls for.

With deciduous trees and shrubs, roses, &c., the chief point is to keep frost from the roots. With the ability to make good the drying out going on overhead, the victory is usually with the plant, even with such as are deemed tender. Mulch well and keep tops dark by strawing up, evergreen boughs, or like means.

Many things, such as the Pomegranate and the Crape myrtle, will survive if a very strong plant be set out to start with. With wood of an inch in thickness and of two or three years age, it will do far better than of but one year's growth. I have seen instances of this in the case of Crape myrtles and *Azalea indica alba*. Both of these do well here in such cases, but it is hard to start them up from small plants.

Last spring my hopes of adding to my outside list of hardy evergreens were raised by finding that a plant of the Sweet Bay, *Laurus nobilis*, which had been left out all winter, accidentally, had got through with hardly any injury at all. It is out now, and in the best possible place to give a good trial to what I advocate, being in a corner of a board fence where not a ray of sun will reach it all day, save that of the first hour of the morning. Finding it had wintered so well led me to try two other subjects, Portugal Laurel, *Cerasus Lusitanicus*, and English Laurel, *Cerasus lauro-cerasus*. These will be mulched and the tops exposed to the air, but not to the sun. The English Laurel I have strong hopes of, as it does splendidly at Washington, D. C., there being groups of them about the Capitol buildings, perhaps 15 to 20 feet high.

Joseph Meehan.

SHRUBS AND TREES FOR PARKS.

For fine winter effect nothing surpasses the berry-bearing shrubs and trees. There are native dogwoods, sumachs and alders that make bright the sunny autumn months with red and yellow foliage, and when the winds have swept bare the branches, the berries gleam like jewels.

The fascination of berry-bearing shrubs and trees is enhanced by the twittering birds that feast upon them. The hawthorns are especial favorites of winter birds. The berries of pyracanthus Lelande, in particular, are large and conspicuous, of bright orange-red hue, and hardy enough to endure severe cold if the birds did not molest them.

Considered in an unselfish light, the city parks are the places to plant the beautiful berry-bearing shrubs and trees. They form an object lesson free to all.

Berries and birds and the otherwise charming effects of certain shrubs and trees can certainly be claimed as features of interest to our parks, which are now a matter of national pride. The plants themselves are of prime consideration, and then the manner in which they are disposed, adds to or detracts from their appearance. As a rule our city parks are under skillful management, and tree planting is well understood. The admiring public sees and enjoys the effect, without appreciating the debt of obligation to the men who make a study of park planting, and who have elevated the science to a proud eminence.

The berry-bearing shrubs are as ornamental in winter, by contrast with the wintry world, as the blooming plants of springtime when all around is green and fresh.

The Japanese privet, with heavy panicles of purplish-black berries, is a beauty. It is handsome as an isolated specimen, and effective in groups or otherwise. The ligustrums are all lovely bloomers, in white, during the spring, but ligustrum media, or Japanese privet, excels them, every one, in berry bearing.

The Mountain Ash, *Pyrus Americana*, is a handsome tree with clusters of bright red berries. There is a fictitious value attached to this tree, on account of the supposed antipathy of snakes, for its leaves. Dead or alive, the leaves and branches of the Mountain Ash are said to be so much dreaded by snakes that the Indians have been known to make a circle, half of withered or fresh ash leaves and half of fire, and to escape from the ash the cobra or deadly rattlesnake will cross the fire. Dr. Oliver Wendell Holmes builds the romance of Elsie Venner on this old belief or superstition.

The benign sunny weather of the American autumn is particularly favorable to the ripening of

winter berries. The gradual process of maturing through Indian summer and the first falls frost, gives them strength and health. Many of them would adorn the shrubs and trees all winter but that nature seems to have and hold them for the feathered songsters of the air.

English Ivy is universally admired, but not every one knows that it is berry-bearing. The evergreen foliage and its beautiful adaptability for ornamental growth, hardiness, and long life, have rendered it classic, and overshadowed the feature of berry bearing.

From childhood I have loved the English Ivy, and for parks, believe it is not eclipsed by any vine that grows. In parks, in gardens, and even in deserted places, where homes once were sheltered by the ivy vines, I have studied its beautiful peculiarities. And observation has shown that old, strong ivy blooms late in the autumn and the seed berries form in clusters, hard and round. These berries hang on with a persistency that is curious to note. While snow wreaths embroider the vines, and ice and sleet coat every glittering leaf, the berries are ripening slowly, and paradoxical though it may seem, in April, when other vines, shrubs and trees are ready to bloom, the ivy berries are black, ripe and mellow, a perfect feast to the summer birds that come early. The berries finally cast tiny nut-like seeds upon the air, where the birds have failed to devour them. In parks, where intense cold prevails, the southern exposure of trees, rocks, arches, or any places offering support for the ivy, will foster its growth. When fully established, the aerial roots will feed upon the elements of air, sunshine and moisture, and the branches will be as much at home in one point of the compass as another; but let the mother root stand on the warm, sunny, southern side of whatever the ivy spreads over and adorns.

G. T. Drennan.

FANCY LEAVED CALADIUMS.

The great value of fancy leaved Caladiums has been well shown in both the Lincoln and Washington Parks, Chicago, conservatories this year.

They fill a void in the summer decorations of conservatories by furnishing superb masses of color that admirably supplement the greens of the various tropical foliage plants that form the basis of summer decoration under glass. The Brazilian Caladiums are especially useful for this purpose, because of their brilliant and varied hues that suggest gorgous South American insects.

The cut shows a well developed Brazilian Caladium grown in the Lincoln Park conservatory.

These tender bulbs are stored during their resting season in dry sand, just as Dahlia tubers are

preserved, but must be examined at intervals, as they are liable to decay. When decayed spots are found the affected part is carefully scraped out,



FANCY LEAVED CALADIUMS.

and on being replaced in dry sand the resulting wounds usually heal over. In early spring the bulbs are potted, and when in condition, removed into one of the show houses, where their handsome coloring usually attracts much attention. The plants, when growing, are kept watered at the root, and the foliage is sprayed twice a week.

Fanny Copley Seavey.

LANSDOWNE RAVINE, FAIRMOUNT PARK, PHILA.

Lansdowne Ravine and its vicinity, in Fairmount Park, Philadelphia, is famous for its natural beauties. Visitors to the Park know of it as one of the many lovely scenes combined therein, and that it is on the eminence above it Horticultural Hall stands. The sequestered and lovely spot the photograph displays is at the head of the ravine. The little stream coming from near George's Hill forms a large lake, and then returning to its stream-like

size, as seen in the illustration, courses on to the ravine proper, and from there, after supplying some basins of aquatic plants, finds its way into the Schuylkill River.

As will be noticed, too much in the way of ornamentation has not been attempted. Its beauty is in its semi-wild condition, and, as Mr. Charles H. Miller, the superintendent, informed me, more wild plants are to be added to those that already fringe the bank. The beautiful native beech seen on the left bank near the bridge is throwing its shadow over some groups of our native hydrangea arborescens, a shrub well fitted for such places. The clump to the left of the bridge consists of wild roses, various eulalias, a few evergreens, and rhododendrons. The large group of plants on the right is *Hydrangea paniculata grandiflora*, with assorted shrubs scattered near it. There are also many plants here and there of the marshmallow, *Hibiscus moschentos*. Besides irises and like plants, Japanese honeysuckles have been used along the banks, and a little to the left of the stream, not shown in the picture, are some groupings of the Japanese rose, *Rosa rugosa*.

The artist has been successful in producing a lovely picture. One can almost fancy he hears the murmuring of the water and itsplash as it gently passes over the little waterfall. The time is the afternoon, and from this time until late in the even-



LANSDOWNE RAVINE, FAIRMOUNT PARK, PHILADELPHIA.

ing it is a favorite resting place for many of the thousands who throng the park of a summer day,



VIEW IN KRUG PARK, ST. JOSEPH, MO.

so enchanting is the spot. Especially can this be said of where the little waterfall is shown, and near which is a rustic bridge, not shown in the picture. And many a one has felt as Byron did when viewing Lake Leman—

“——; once I loved
Torn Ocean's roar, but thy soft murmuring
Sounds sweet as if a Sister's voice reproved,
That I with stern delights should e'er have been so moved.”

Joseph Meehan.

KRUG PARK, ST. JOSEPH, MO.

The popular improvement known as Krug Park was donated to the city of St. Joseph, Mo., some ten years ago, by Hon. Henry and William Krug, and at the time of the gift was already in good condition. Since that date small appropriations have been annually provided by the city for the improvement and maintenance of the park.

The features of the tract calling for special attention are its rolling and picturesque formation, permitting of a regular mountain drive winding in and out and traversing its hills and valleys. Most of its paths are finished in cement, which, after the heaviest rains, are soon dry and clean, and never wash.

Among its attractions are some old natural rock-

eries, which have been improved by artificial additions, and thus have been considerably enlarged. There is a lake in a valley, and on the bluffs bordering it a driveway climbs to the summit—a height of several hundred feet, from which views of the lake can be had, resting as it were almost immediately beneath one.

Great efforts are annually made for a floral display, which is quite extensive, new designs being laid out every year, in which bedding plants form the main features.

To supply the planting material a block of greenhouses are operated and to add to the interest of the Park a conservatory is about completed.

The accompanying illustrations will elaborate better than words on the characteristics of Krug Park, for which we are indebted to Mr. R. G. Rau, the superintendent.

THE CHAPEL, RIVERSIDE CEMETERY, CLEVELAND, O.

For a long time the trustees of Riverside Cemetery, Cleveland, O., contemplated improvements in the Chapel and Receiving Tomb building, it not being altogether satisfactory to them, and last spring plans for improvement were prepared by Messrs. Steffens, Searles and Hirsh, architects, which were approved and work was begun.



VIEW IN KRUG PARK, ST. JOSEPH, MO.

The design provided for the addition of a porte-cochere to the front and an apse in the rear of the old building. Entrance to the crypt is arranged in the apse. The new portions architecturally con-

in their approval, and that of all permanent improvements this is most acceptable.

In the west gable of the porte-cochere is carved a large medallion—a reproduction of one found in Pere la Chaise Cemetery, Paris—the design seeming to enjoin silence on all who pass by. In the east gable is a bird with outstretched wings, emblematic of the departing spirit.

The chapel has been newly painted and made much more cheerful within by the addition of three pretty Gothic windows. The improvement, which is completed, has cost in all about \$2,700.

Old age is falling on the celebrated vine at Hampton court, England, which had come to be regarded as a sort of permanent institution. Still, the vine is reasonable in showing its age, for it has been a very long time before the public. It has flourished since 1769 and for about 100 years it has steadily produced about 2,000 bunches of black Hamburgs annually. This year, on account of the weakness of age, it is only allowed to bring about 1,200 bunches of grapes to maturity, but it is quite possible that it may yet live another forty or fifty years. This patriarch among domestic vines affords a unique example of great longevity combined with remarkable fertility.



THE CHAPEL, RIVERSIDE CEMETERY, CLEVELAND, O.

form to the old building and are constructed of buff sandstone.

The porte-cochere is already proving a most welcome addition. Mr. J. C. Dix, the superintendent, informs us that the lot owners are pronounced



MAIN ENTRANCE, CROWN HILL CEMETERY, INDIANAPOLIS, IND.

**MAIN ENTRANCE, CROWN HILL CEMETERY,
INDIANAPOLIS, IND.**

The main entrance of Crown Hill Cemetery, Indianapolis, Ind., is located on the east side and near the center of the Crown Hill grounds, and is 200 feet back from the main city street, which it faces. This intervening space is laid out and planted and is virtually a small public park.

The gateway itself is constructed of Indiana, Bedford, stone handsomely carved, and is partially covered by Boston ivy. This ivy was planted about six years ago and it now covers the structure as shown. The graceful growth of the ivy over this entrance is very striking, and from it may be well imagined the picturesqueness of the old English buildings, whereon the ivy has clung and grown more attractive year by year for generations, the beauty of which is a joy forever.

The three pairs of double iron gates are of wrought iron made by an Indianapolis firm from a special design by the architect; the gateway immediately adjoins the large main office and waiting room building, one vine covered gable of which is shown on the right in the picture.

This main entrance opens directly into a park of lawn, shrubbery and forest trees, no signs of cemetery work being visible on entering.

The office building and gateway combined were built at a cost of \$48,000.

VICTORIA REGIA.

Victoria regia and its varieties, Randi and Trickerii, are the grandest aquatic plants in cultivation when seen in their fully developed condition. A number of plants are to be seen in different parks, cemeteries, and public gardens during the summer months, but few are to be seen in their best possible condition. Our summer season is very favorable for their development, but hardly long enough, but when in good condition they are most interesting as well as attractive.

The grandeur of the Victoria is enhanced by a good setting of aquatic plants and marginal planting. The very choicest and best of *Nymphaeas* should be included in the selection for this purpose, using mostly the tropical varieties and only such hardy varieties that are novel and unique, and very striking in color. The cultivation of aquatic plants is rapidly increasing, and those who a season or two ago made their first attempt with a few tubs, now aspire to grow Victorias. Such is the fascination of these delightful flowers, and the lily ponds. Nobody seems to tire of them or want some new thing instead; rather dispense with some other style of formal bedding, and enlarge upon the water garden, the wild or natural garden. The increasing demand for hardy perennial plants is a good sign, showing the tendency is in the right direction.

In time of peace prepare for war. The truth of this adage has been emphasized of late. We can apply the same to arts of peace, and in winter prepare for summer. Convinced as I am that not a few contemplate growing the Victoria and other aquatics, and that a still larger number would do so if they felt more confidence in themselves, or certain as to the results, I append a few hints on its cultivation in the open air, hoping this may help the good work along and encourage the faltering.

The Victoria is sometimes grown as a single specimen plant in a pond, without the addition of any other aquatic plants. This is a mere matter of taste, though in some cases it may be for lack of room. I am inclined to think that in no better

taken away. Several of the Nymphaeas were plants that had been in the aquatic house during the winter, and had been in flower continuously both summer and winter. In fact, several of the plants have flowered for two and three consecutive seasons, indoors and out, and the flowers are equally as good as they were the preceding season. One of the main objects in growing aquatic plants, especially the tropical Nymphaeas, is to start early enough so as to get the plants into good size and condition when planting time arrives. Our summers are none too long; in fact, not long enough in which to develop their flowers and enjoy them in the highest state of perfection for any length of time.

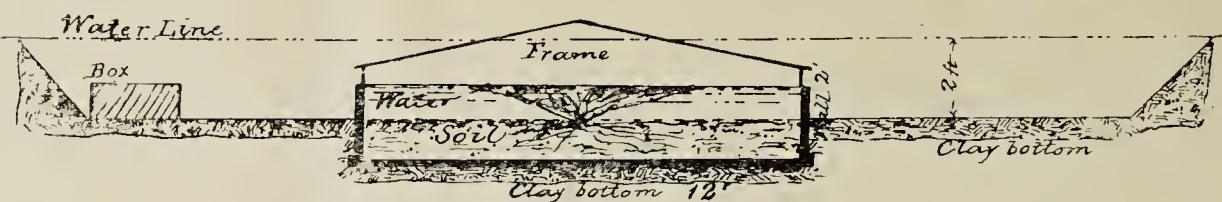
All growers must have noticed what excellent



HENRY A. DREER'S TROPICAL WATER LILY POND, RIVERTON, N. J.

way can it be grown than in company with Nymphaeas and other aquatic plants. The illustration herewith shows a pond planted as above described, and gives an idea as to arrangement of Victorias and Nymphaeas, also the surroundings. The Victorias, as seen in the illustration flowered about the middle of July. At the same time all the tropical Nymphaeas were well established, though they were not at their best till August. You will note that the Victorias flowered as early as the middle of July; this means that the plants had arrived at maturity at this date, and continued thus until October; altho' one plant flowered as late as the 15th the plants had been chilled and were past their best. The Victorias received no artificial heat after the middle of June. As early as possible in June the tropical Nymphaeas are planted and what protection the Victorias had at this time was then

condition, and the number of undeveloped flower buds there were when the first pinching frost finished them for the season. As to the Victoria, it is more important that an early start be made. Good plants, well established in 9" pots, should be planted in permanent quarters early in May. It will be necessary to apply artificial heat in some way, as a temperature of 85° must be maintained. In a small pond this can be readily accomplished by heating the whole pond, but one as represented in the illustration, where there is accommodation for three Victorias and three dozen or more Nymphaeas, heating the whole pond is out of the question. This pond is but two feet deep, thus allowing an attendant to work among the plants with ease. The Nymphaeas are all grown in shallow boxes 10" to 12" deep, thus allowing a foot of water over the crowns of the plants, but this is not enough for the



SKETCH OF POND FOR GROWING VICTORIA REGIA.

Victorias, and to obtain more the bottom of the pit (which is 12 feet square) is excavated a foot deeper than the bottom of the pond. The walls of the pit are two feet high, thus being one foot above the bottom of the pond and one foot below. The pit contains one foot depth of rich compost, (summer rations for one plant.) The soil is the same as is used for all water lilies, two-thirds turf loam, one-third rotten cow manure. At planting time, early in May, the water is heated, or rather the pit is heated. As there is but one pipe, this is laid on the bottom of the pit, thus affording bottom heat as well as top heat. The heating is done by steam in this case, supplied by a near-by boiler that furnishes power for machinery and heating for a block of greenhouses. One 1 inch pipe is ample for the purpose. As there is no return pipe, the exhaust empties into the pit. The pipe crosses the pit diagonally and is covered over with a tile pipe, so as to allow the heated water to rise or circulate. It is necessary to have a valve to regulate the supply. Hot water will do equally as well as steam for heating, but more piping will be necessary; also a return pipe to the boiler, which would necessarily have to be below the pond or the pond of greater depth than above described. A frame, equal span, is placed on the brick wall, and hot-bed sashes are used for the covering. Under such conditions the Victoria plants make rapid growth and arrive at maturity early in July, when, under ordinary conditions, it would only be safe to plant out where no artificial heat is applied. Then it would be several weeks before the plant arrived at maturity and the summer season would be already on the wane, the days shortening, and the time is gone before one can really enjoy the delights and pleasure of fully developed plants.

The size and shape of the pond are immaterial, and different grounds have each their diversities, according to the section of country in which they may be located.

Where natural water ponds exist, tender and hardy Nymphaeas and Nelumbiums may be planted, but the Victoria should not be planted unless in a warm section of the country. It seems imperative that an artificial pond must be built wherein to grow the Victoria, so as to have proper control of the temperature of the water, especially at the early

part of the season. The pond should be sheltered from strong winds, yet fully exposed to the sunshine, and where trees and shrubs do not exist they should be planted at the earliest date possible. Ample room for inspection should be allowed, not omitting benches, especially under some shade trees. A continuous walk around the pond is objectionable; a circuitous walk which winds around clumps of shrubbery, ornamental grasses, Bamboos and hardy perennial plants is much more in harmony, with openings near the edge of the pond, giving different views. This may not be suitable in all cases. A pond with ornamental coping will look better with no plants immediately next to it, but the best feature is that which approaches the most natural, and this feature is being more and more appreciated, as the beauty of nature makes its impress on the people.

One of the most enjoyable visits to the tropical ponds is that made in the evening, when the whole is illuminated. The colors of the night-blooming Nymphaeas are of a dazzling brilliancy, and as the Victorias are night-bloomers, opening their flowers at sunset, the atmosphere is laden with a rich perfume which all vanishes with the approaching light of day, making it all the more attractive for an evening visit. Provision should be made for inspection by electric light.

From the foregoing one may naturally conclude that it is useless to attempt to grow the Victoria without artificial heat. This is exactly the case with regard to the varieties *V. regia* and *V. Randii*, but the variety *V. Trickeri* is entirely different in this respect. The seed will germinate readily in water ten to fifteen degrees lower than is necessary for the other varieties, and what is more singular, seed germinates readily in the open pond in the early summer—seed that has been out all winter. In the illustration, at left hand corner and immediately in front, near the center, are to be seen several leaves of self-sown plants, with rims, at a very early stage. These plants produced flowers early in September, thus demonstrating that the Victoria, especially *V. Trickeri*, can be grown without artificial heat. No plants are more easily grown, and none give larger returns for amount of time and labor spent on them. Provide the proper conditions and they will grow to the satisfaction of all concerned.

IMPROVEMENTS IN CEMETERY WORK.

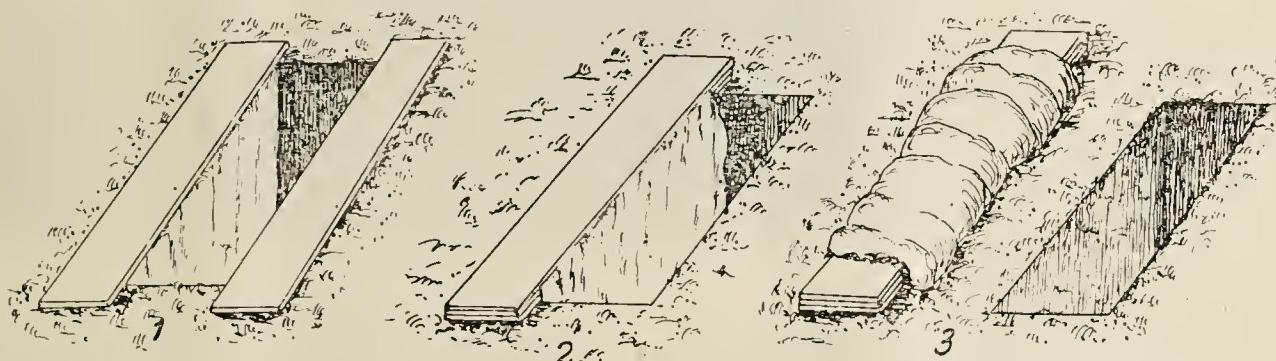
The accompanying illustrations show some of the improvements which have been introduced into Forest Hill Cemetery, Kansas City, Mo. Neatness and orderliness in connection with the workmen



EMPLOYEES' UNIFORM, FOREST HILL CEMETERY.

about a cemetery is being found to be a good investment, and the uniform shown in the cut combines both appropriateness and low cost. It is in the form of an overall, made of a narrow striped, dark brown and black denim, with hat to match the color. As Forest Hill is the only cemetery in the locality adopting this innovation, the superintendent has been much complimented by the lot owners.

Mr. Sid. J. Hare, the superintendent, also sends



BURIAL IMPROVEMENTS, FOREST HILL CEMETERY, KANSAS CITY, MO.

this sketch and notes descriptive of his method of making graves. He uses planks, to prevent caving, white muslin grave lining and covers the dirt with sods instead of evergreens. The plank is covered with a strip of corrugated rubber to give good foothold, and the lining is tacked to these planks, around which it is wound when filling is begun. It is a very expeditious arrangement, as to time. The earth is thoroughly tamped when filling grave and the sod taken up when grave is dug, is replaced on top of grave, and is crowned about four inches. This gives a neat finish and allows use of lawn mower at once. To explain the figures : 1. Shows planks and lining in place. 2. Shows both planks together ready to wind muslin around them as they are removed. 3. Shows cloth removed and grave ready to be filled.

EARLY FLOWERING BULBOUS AND TUBEROUS PLANTS, II.

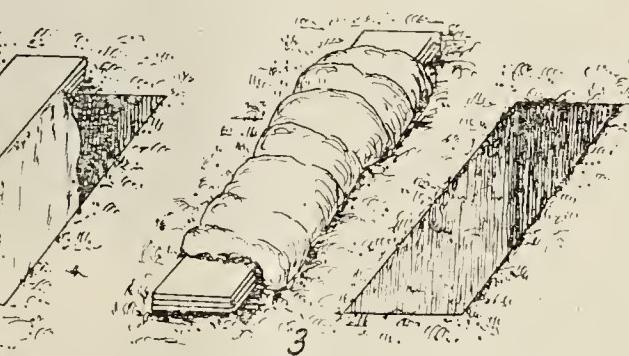
In early spring the main part of the carpet that covers our forests is composed of the Spring Beauty *Claytonia Virginica* with its narrow leaves and clusters of white or rose, striped flowers, while such flowers as Isopyrum, Cardamine purpurea, Bicucullas, Erythroniums Erigenias bulbosa, Sanguinaria Canadensis, Trilliums Hepaticas, Phlox divaricata, Violas, Fiarella cordifolia, etc., form the pattern. It is the most abundant of all our early tuberous flowers and is very pretty. Decays to the ground early in May.

Dentaria diphylla, two leaved Pepper-root, Crinkle-root, has two rich dark green trifoliate leaves and a raceme of pure white candytuft like flowers. Root long, slender, edible. Good for cut-flowers, forcing, or cool moist places in the flower garden.

Dentaria lancinata, the cut leaved pepper-root, has light green finely divided leaves, and racemes of fragrant white flowers, rose outside. Has small, odd looking yellow tubers.

The pepper and salt *Erigenia bulbosa* is a very small, very early tuberous rooted flower that does not make a grand show, yet we cannot help but admire its small pretty leaves, and dainty little clusters of small white, purple-stamened flowers. It decays very soon after flowering, consequently it is very difficult to obtain.

The white Erythronium, *Erythronium Albidum*, has two beautifully spotted leaves and a solitary, nodding white flower, the variety commonest in south-east Michigan having flowers rose color outside. Bulb is set deep



in the ground. It is a very pretty early bulbous plant, and loves rich shades. If large quantities are wanted of this or the next variety it is better to obtain the 2 or 3 year old bulbs, and plant thickly. These would bloom in from one to three years, while the leaves are very pretty. The flowering bulbs are deep in the ground and hard to obtain. It decays above ground early in June.

The yellow Erythronium, *Erythronium Americana* has darker spotted leaves, and rich golden yellow, nodding, flowers, very handsome in the full sunshine, for then the segments become revolute like those of the superb lily, *Lilium superbum*. Both species are fine for cutflowers.

Hypoxis erecta, Star grass, is a bulbous plant with grass like leaves and a cluster of rich yellow flowers. It is very pretty growing thickly in grassy, dry, or moist sandy places.

Wilfred A. Brotherton.

PARK AND CEMETERY.

ROYAL BOTANIC GARDENS, KEW, SURREY, ENGLAND, VIII. ROCKERY.

In 1867 a Rockery was built of Reigate sandstone north of an ice house used in the old Botanic garden. It contained 300 Alpine plants and the next year some 600 more plants were planted in it. In 1874 a hardy fernery was laid out in connection with it. The increasing taste in these plants made their allotment altogether too small. In fact so interested and appreciative had the public become that a number of gentlemen addressed a memorial to Her Majesty's Office of Works towards the end of 1881, setting forth their especial interest, and a gift of the executors of the late George Curling Joad, F. L. S., of Oakfield, Wimbledon Park, in accordance with his expressed wishes offering the entire collection of herbaceous plants cultivated at Oakfield. The treasury which had the building of a larger Rockery under consideration appropriated £500 at once for its formation. The site selected was a level piece of ground near the north of the herbaceous grounds, and to give variation to the whole, the walk was sunk four feet and laid out in a winding course leading between picturesque and rocky slopes supposed to represent a rocky course of a stream such as may be erected in some of the side valleys of the Pyrenees. To quote the director: "Such streams dry up after winter, and are bounded by rock piled banks amidst the crevices of which a copious summer vegetation springs up. Above the rocks an evergreen shrubby growth descends wherever the soil is of sufficient depth."

The path eight feet wide and $5\frac{1}{4}$ feet long at the bottom of the Rock garden represents the dry bed of such a stream. On either side fragments of rock are piled up in a manner as little artificial as was possible to a height of about five feet. Above this the view is limited by shrubberies of box and rhododendron rising to a varying height.

The natural soil of the site chosen was a perfectly pure sand. As much good soil as possible was therefore thrown in behind the rock bank together with turf parings and the sods of the top spit. As the stones were arranged this was carefully rammed down, and up to the present time (November 1883) no perceptible subsidence of any part has occurred. For parts of the banks with a northern exposure tree stumps were employed. These have since been substituted by rocks. This enabled us to use up a large accumulation from the heavy windfall in the pleasure grounds referred to hereafter, and it also enabled us to extend our operations on a considerably larger scale than the money at our disposal would otherwise have permitted. The use of wood has been a good deal criticized; but it is not wholly out of

keeping with the general idea, and as a matter of fact it proves admirably suited to the growth of the larger and stronger growing species.

One of the chief difficulties to contend with in this country in the cultivation of herbaceous plants is the violence and volume of summer showers. As parts of the bottom of the Rock garden are sunk as much as four feet below the general level it was necessary to thoroughly drain the whole to prevent swamping from rainfall. A drain with numerous catch-pits was carried throughout the whole length and connected with the main drain of the garden, which discharges into the Thames. In order, on the other hand, to protect the numerous plants of more humid climates from the effect of summer drought a copious water supply was laid on with stand pipes at intervals. The water of the garden supply being always maintained at high pressure the whole rock-work can be rapidly and efficiently watered



IN THE ROCKERY, KEW GARDENS, ENGLAND.

by an improvised shower in very dry weather.

I must express my obligations to several gentlemen, who, during the progress of the work, favored me with many useful suggestions and otherwise interested themselves in details. I may especially mention Mr. George Maw, F. L. S., Dr. Masters, F. R. S., and the Rev. H. Ellacombe. To the latter gentleman we are particularly indebted for considerable trouble in procuring us a quantity of finely weathered pieces of Bath oolite, Colonel A. M. Jones of Clifton, also most kindly exerted himself to procure a quantity of weathered mountain limestone from the well-known Cheddar Cliffs. This is a material admirably adapted for the purpose, as the stones can be arranged with little care but agreeable effect much in the position which they naturally occupied on the talus of the cliffs.

Besides these sources, on which we should have drawn more if money had been available, we made use of an overgrown and neglected rockery (Stonehouse Ruins) dating from the time of George III. Most of the

stone of which this was composed had disappeared below the surface by gradual subsidence. Besides a large quantity of useful material several fine masses of marble and Portland oolite were recovered by digging. As a good deal of the stone so obtained had been squared and worked we were obliged to dispose of it in several masses roughly simulating uplifted stratified rocks. The crevices were all plugged with soil and these afford positions especially suited to the habits of many plants and these when so grown produce an agreeable effect.

As the rocks were built up, care was made to leave between them deep pocketing for the subsequent reception of the plants. The pockets were filled with loam mixed with leaf mould, and in this the majority of the plants appear to thrive. The principle of a rock garden is to imitate the conditions of growth of deep-rooted plants. Almost all sub-Alpines are of this character, the distance to which their roots extend makes them to a great extent independent of extremes of temperature and also of drought. They are all, however, intolerant of standing moisture and flourish best on sloping broken ground from which water readily flows off and does not rest near the collar of the plant and its dormant winter buds. Rock fragments appear to be congenial to the development of roots which follow their surfaces, they keep also no doubt the temperature more equal than soil and yield a more uniform and constant supply of moisture. In this Mr. Joad's 2,630 plants were later planted in geographical arrangement with an effect greatly admired by the public.

The word "Rockery" is popularly associated with an idea of Alpine plants. The interpretation of this vernacular is anything small and neat that can be planted amongst the rocks. In reality only those peculiar to the Alps are Alpine and this definition excludes many found in the Alps. Altogether there are about 1000 species of ferns and flowering plants found in or equal to the altitudinous zone of the Alps and those of Europe, Asia and America are all very similar. Some plants are typically endemic to a warm climate but get into colder zones and vice versa. Geographical botanists divide the plants into zones—those peculiar to the Arctic belong to the Agrarian where no cultivation is carried on, the lower limit of this zone is marked by *Digitalis purpurea*. Mr. Baker tells us the highest limit is marked by *Rubus camamorus*, where the atmosphere is so rarefied as to prevent human life comfortably existing. He further states that the second descending limit is marked, by *Salix herbacea*. Even though entirely included within those generally known as Alpine plants only about $\frac{1}{4}$ are real Alpines. One of the most difficult problems in cultivating rock plants is the fact that artificial environments are so greatly at variance with the natural circumstances, it is often and in the United States generally impossible to simulate them and hence cultivate the plants. In the frigid zones where the ice capped peaks have a vegetative season of but a month or two, to transfer these plants to a region where the vegetative season lasts from six to twelve months is to attempt an acclimatization usually impossible during generation of a species. In *Soldanella* for instance, the

peduncle will generate enough heat around its growing point to melt the ice surrounding it and while it circumferentially lengthens out, its wake is again frozen, the tip still continuing to grow and literally force itself through the ice. As if to defy human subservience, the plant is intractable when transferred to a climate opposite in all main character to that for which it is provided with unique and special arrangements for its perpetuation. On the other hand *Gypsophila saxifraga*, a true Alpine plant, grows quite contentedly here. Here it is possible to determine what the vital points a plant must necessarily have, to judge whether or not it will thrive down here science has not revealed.

Among the noteworthy individuals in the Kew Rockery are:—*Ramondia pyrenaica*, that difficult little blue flowered plant from the Pyrenees thriving well. *Physalis alkekengi* in a mass is pleasing throughout the winter on account of the large bright red persistent fruit. *Polygonum affine* from the Himalayas forms a dense mat of crimson spikes. A few of the better plants suitable for partially clambering over rocks are:—*Saxifraga oppositifolia*; *sedum sexangulare*; *Saxifraga aizoon* var.*rostrata*; *Arabis procurrens* var.*iegita*; *Aubretia deltoidea* in varieties; *Saxifraga divisa*; that grand little *S. hypnoides*; *Sempervivum Lamottei* and *S. hirtum*. In a specially provided bog the Himalaya *Primula rosea*, the Madeira *Orchis foliosa* and our own *cypripedium parvifolium*, *C. californicum*, *C. pubescens* are growing. Outside in the rockery it is unfortunate that our American *Sarracenia*, *Shortia*, *Pyxidanthera*, *Galax*, etc., do not thrive.

Among the Conifers are *Picea excelsa* var. *dermosa*; *Cupressus pisifera* var. *aurea*; *Thuya gigantea* var. *pliata*. In one moist nook is that interesting and feathery *Equisetum maximum*. *Iberis sempervirens* var. *Jarrexiana* gracefully drapes a projecting stone. *Artemisia valesiaca* of Piedmont, with its glaucous foliage is pretty indeed. *Cotoneaster congesta* is charming and *Eriogonum umbellatum* must needs gain recognition here. Altogether the Kew Rockery harbors a large portion of the many gorgeous flowering or unique growing plants indigenous to the higher altitudes of the universe. A large and choice selection and exceptionally well kept, it is deservedly one of the most interesting features in the garden

Emil Mische.

In small grounds where effects are not thoughtfully preconsidered one sometimes sees combinations which, at least, serve for a warning says a writer in *American Gardening*. "Not long ago, I saw a bed of scarlet geraniums which it was an aesthetic pain to look upon. They were vigorous, well-grown, and covered with great trusses of brilliant bloom; just the profusion of dazzling color to delight the eye in a setting of green turf. They were in a well kept yard, freshly mown and tidy, but alas, they had for background a yellow colored house, and the only possible view from the street included that wealth of scarlet bloom against clapboards of the ugliest yellow imaginable. Had the house been a gray, or olive, or even white, the effect would have been as noticeably pretty as it then was shockingly ugly."

GARDEN PLANTS—THEIR GEOGRAPHY—XXXVI.
ERICALES.

THE VACCINEUM, ERICA AND EPACRIS ALLIANCE.

This alliance of plants has 13 tribes, 104 genera and 1660 species. They constitute perhaps the most beautiful group of flowering trees and shrubs known to sub-tropical and temperate regions. They are very largely evergreen, and their flowers are so conspicuously handsome in form and chaste in color, that they have become prime favorites with all who can grow them. They are represented in most parts of the world, but at the sea-level of the tropics their representation in gardens may often prove difficult, for in the eastern hemisphere at least I do not remember having seen a single showy representative of the alliance at any altitude lower than 5000 feet. They seem to arch over the tropics at that and higher elevations. Yet a number of "tropical" species are recorded at insular stations, in South America and the South Pacific Islands. Their distribution as species or even as tribes is not general, but rather local; for instance the *Vaccineæ* are chiefly American, the *Ericæ* chiefly African and European, and the *Epacrideæ* Australasian, with a single *Lecitanthus* in antarctic Terra del Fuego. With a few exceptions too the parasitic *Monoëropeæ* are North American, while the *Galaxæ* are equally divided between that continent and northeastern Asia. Trees, shrubs and herbs are all represented; a few are bog plants, some of the *Vaccineæ* from Peru and Chili are said to be parasites, and the curious "Fir-rapes," "corpse plants," and *Lennocæ* are root-parasites—almost never cultivated. Several species of the various tribes yield succulent fruits, and different portions of the plants are edible in others. Some are however poisonous.

The *Thibaudieæ* are largely sub tropical and tropical plants found from Mexico, the West Indies and British Guiana, through the mountainous parts of South America, with a single outlier recorded from New Guinea, and some five species of *Pentapterygium* from the Himalayas.

The *Vaccineæ* are more familiar, and contain several plants yielding huckleberries, blueberries, cranberries, creeping snowberries, etc. *Vaccinium corymbosum* has nice fruit, rather pretty flowers, and highly colored foliage in autumn. *V. arboreum* grows to 20 feet high at the south. In transplanting these plants from wild localities their tops should be sheared close down, when they will usually grow. There are several representatives of the tribe on the Andes, and the mountains of tropical Asia.

Arbutus has 10 species in the Pacific United States and Europe. The "Madrona" *A. Menziesii* is a fine tree ranging from 60 to 80 or more feet

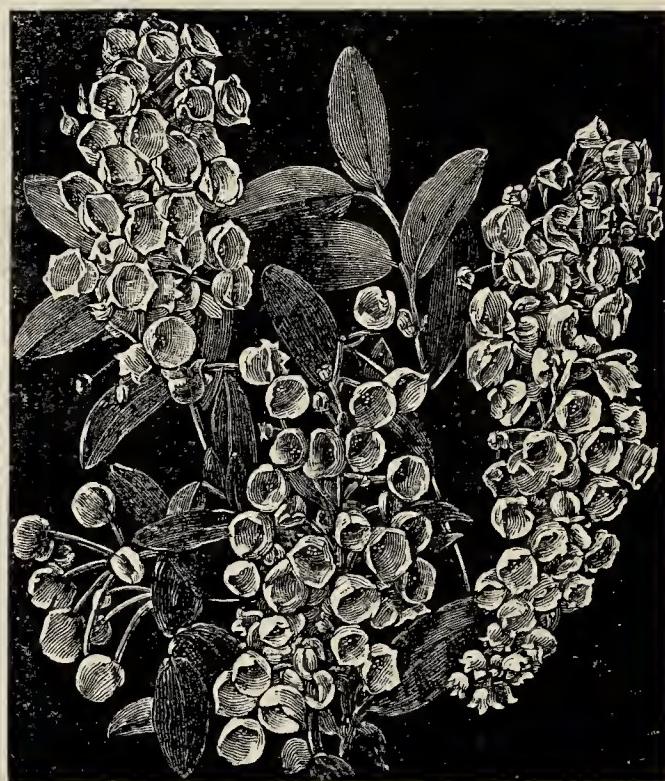
high at northern Pacific coast points, with evergreen foliage, and orange colored unpalatable fruit. There are several lower growing smaller leaved forms found at points southward to Mexico. *A. Unedo* is the European "strawberry tree" found wild only at the lakes of Killarney in the British Isles, and hardy in Georgia and other states of the middle south. There are several varieties of *Unedo*, and hybrids between it and *A. Andrachne*, a species from eastern Mediterranean regions.

Arctostaphylos, "bearberry," has 15 species in cold and temperate parts of the northern hemisphere, and southward on the mountains to Mexico. They are dwarf shrubs, or occasionally 20 feet high evergreen or deciduous trees in California, some are grown in parks and gardens.

Pernettya in 15 species are from sub-tropical South America, New Zealand and Tasmania. They are evergreen shrubs with pendulous white flowers and variously colored berries.

Gaultheria has 95 species in North America, South America, on the mountains in tropical Asia, in Japan and Australasia. The "Wintergreen" "tea-berry" is a common little native plant, but rarely taken into the garden.

Cassandra calyculata, *Cassiope*, in about 10 species, and *Leucothoe* in a similar number have

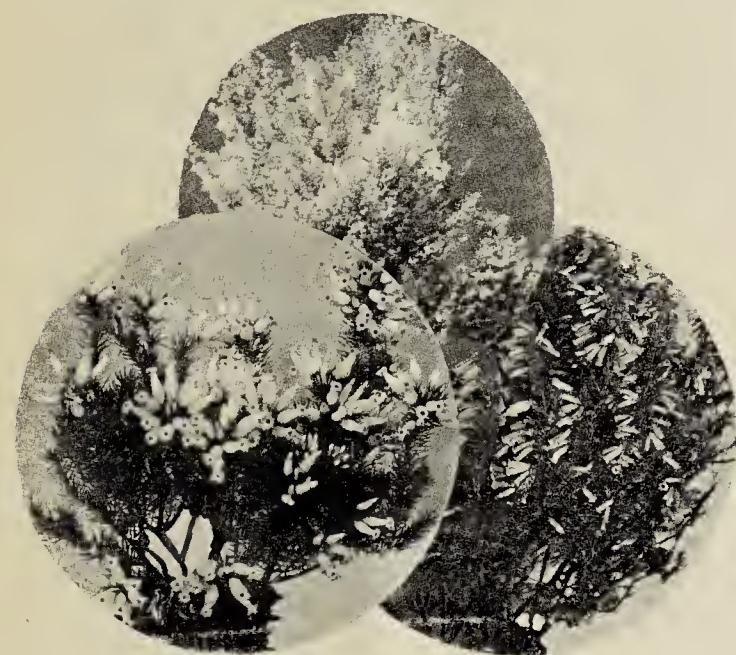


PIERIS MARIANA.

between them absorbed a large number of the plants which the nurserymen who are not up to date, continue to catalogue after Linnaeus and other old time botanists.

Oxydendron arboreum is a monotypic chand-

some small tree or shrub. It is rather hard to establish in tree form at the north, and nurserymen are not always careful to keep clean well trained young plants. The scrubby stuff should be cut down to the roots, and allowed to grow up again in bush form. It is found along the Alleghanies



ERICA MELANTHERA NIGRESCENS.
E. VENTRICOSA VAR. INTERMEDIA.

from Pennsylvania southward, has light green foliage and racemes of elegant whitish flowers, and no tree colors more beautifully during the autumn. Where it succeeds it will be especially useful for grouping among Rhododendrons.

Epigaea, the "Mayflower" has 2 species in North America and Japan. The flowers are deliciously scented, and are largely sold in the city markets of the middle Atlantic States. The plants are deemed hard to establish in gardens. In British gardens they are easy, and usually transplanted during autumn. Some nurserymen keep stock in pots. It prefers gravelly sandy scrub land.

Lyonia paniculata is now considered the correct name for the *Andromeda ligustrina* of some botanists, and *Zenobia speciosa* has superseded the *A. speciosa* of Michaux, and the *A. pulverulenta* var. of Bartram.

Andromeda polifolia is a monotypic narrow leaved evergreen found in cold boggy places in northern temperate and sub-Arctic regions. It varies considerably, and is probably far more responsible for the accepted British ideas of the "American garden" than any other plant.

Pieris has 10 species in North America, Japan, and the mountains of other Asiatic countries. The genus absorbs the "stagger bush," *A. mariana*, found from Rhode Island to Florida, and also the species sold as *A. Japonica*, *A. floribunda*, *A. formosa*, and others. *Pieris Japonica* has a variegated form

They are often useful and pretty evergreens, doing well in partial shade.

Enkianthus has 5 species, natives of Japan, China and the eastern Himalaya. They are best adapted to points on the Pacific Coast, and possibly the Japanese *E. campanulatus*, *E. cernuus*, and the Himalayan *E. ovalifolia* may do well in the southern states.

Calluna vulgaris is now regarded as monotypic, and is one of the commonest "heathers" of Europe, Northwestern Asia, the Azores, and strange to say (sparsely) also of the New England States, Nova Scotia and Iceland. It sometimes establishes itself very well in gardens as far south as Philadelphia at least.

Erica is a large genus of 400 species chiefly found in South Africa, the Mediterranean regions, and northwards to the British Islands and the Caucasus.

I cannot begin to do them justice in these papers. All of the writings have failed to do them justice. But may I point out to Californian friends that many of the African species and their varieties are particularly well worth their attention, for if their roots have freedom they often endure extreme drought—when established.

The British dictionaries and catalogues have mentioned nearly 500 species and varieties of cape heaths as having been under cultivation in those islands as cool greenhouse plants; and about 30 species and vars. of the European ones as hardy in their gardens.

Trenton, N. J.

James MacPherson.

It has been observed that the relative frequency with which trees are struck by lightning varies with the species, and it is suggested by the St. Louis *Globe Democrat* that the division of Forestry at Washington should investigate the question. It is estimated that if the beech is represented by 1, the pine stands at 15; trees collectively rank about 40 and oaks 54. The trees struck are not necessarily the highest or the most prominent. Trees have been struck before rain began and split, and trees have been struck during rain and only scorched. The divisions of forestry and of vegetable pathology might combine with the weather bureau in an exhaustive investigation of this subject, and that those familiar with forests in their respective neighborhoods tender their experience as to the relative frequency of lightning strokes on different kinds of trees. But before any statement is made as to the relative danger of standing under certain trees during thunder storms, the more general questions of the effect of lightning upon trees will have to be gone in to.

PARK AND CEMETERY.

* PARK NOTES. *

The science of gardening has been taught in Russia since 1812. It was instituted in the Crimea for the purpose of cultivating southern plants, but there are now many courses in the various provinces.

* * *

The lands held by the United States Government for forest reservations, and which are permanently withdrawn from settlement for the purpose of preserving the timbers and protecting the sources of the streams, are situated in the following states and territories: Arizona, 1,861.760 acres; California, 8,511,794; Colorado, 3,103.360; Idaho, Montana and Washington, 16,818,-720; New Mexico, 431,040; Oregon, 4,653 440; South Dakota, 957,680; Utah, 875.520; Wyoming, 3,196,

* * *

At a recent meeting of the Municipal committee of the Civic federation of Chicago a committee was appointed to investigate the subject of public comfort stations, which it is proposed to establish throughout the city, as is the custom in the principal cities of Europe, and which are already in operation as an experiment in Boston and New York. This is an important matter—one in which our large American cities have been behind European municipalities of like extent, and strange to say many years behind.

* * *

The commissioners of Lincoln Park, Chicago, have practically decided upon improvements and additions to that park which will involve an expenditure of from \$3,000,000 to \$5,000,000. It has long been contemplated to increase the area of the park by extending it into Lake Michigan, and the recent severe storms which created havoc on the sea wall and protective works of the shore, necessitating a large outlay for reconstruction and repairs, makes the extension scheme of practical consideration. By the plans already prepared a square mile of territory will be added to the park domain, which will afford attractive features in driveways and promenades unequalled anywhere. Detail plans and estimates are now being prepared and prospects appear bright for the early inauguration of work upon this fine improvement.

* * *

No southern state appears to be doing more progressive work on modern lines than South Carolina, as the following item will serve in a measure to show: The State Federation of Woman's Clubs, in its convention last June, adopted village improvement as an important branch, and as a result many clubs heretofore working mainly on literary lines are taking up this department. The seaboard Air Line Railroad, in addition to sending out traveling libraries to towns on its line desiring them, is also offering encouragement to village improvement by donating plants, etc., to such associations. Information relative to the above can be obtained by addressing Mrs. J. W. Lunny, chairman village improvement committee, Seneca, S. C. Mrs. W. W. Coleman, of Seneca, is president of the Federation of Woman's Clubs.

* * *

Cincinnati, like nearly every other city in the Union has suffered from hard times and park improvement has been comparatively dormant, the available funds being mainly employed for maintenance. The total receipts for the park system for 1897 was \$49,360.36 which the expenditures consumed. Considerable planting was however done as the expenditures include the item of \$1,435.43 for plants, trees, shrubs and seeds.

Mr. R. H. Warder, the superintendent, makes an excellent point in a paragraph of his report, not only from the truth conveyed, but from the studied suggestion—politics tabooed. He says: "The fact has been too much overlooked that the proper execution of park work can not be intrusted with safety to ordinary laborers. In all respects this work is very different from that performed by men employed in street-cleaning and like occupations. Every member of the force should be more or less well acquainted with the commonest kinds of grass, weeds, plants and trees, should be interested in his occupation, and realize that he holds his place through good behavior. All experiments in changes among park workmen for so called political reasons have invariably been attended by disastrous results and losses to the public service."

* * *

The campus of Wabash College, Crawfordsville, Ind., is being in a measure transformed into an arboretum after plans suggested by Mr. Kern, the late park superintendent of Toledo, O. In a communication on the subject, Prof. Mason B. Thomas of that institution says: "Our campus was covered with a very dense growth of large trees, many of them dead and all in need of trimming. We have cleared the ground of all the bad trees and trimmed the good ones, until the campus looks like a park of a very acceptable order. We then put on the ground all of the walks and drives outlined in the original plan. The classes have given us a fine fountain and entrance steps. We are now working on the plans for planting shrubs and trees to correspond with the outline of Mr. Kern. Our campus has about 30 acres and by these substantial improvements along a definite line, will make a fine place to carry out my original idea, that the environments of an educational institution should represent the very best story of the national relationship of the members of the plant kingdom. Every group of plants will mean something and the story of evolution will be told by the plants themselves." This is an example which might well be followed at very many of our educational institutions.

* * *

The 27th annual report of the Fairmount Park Art Association was presented at the meeting held in Philadelphia, November 29. The association has now a total membership of 1,321 and the total balance in hand is \$79,135.51. An explanation of the postponements of the unveiling of the Grant monument in Fairmount Park is given, with the announcement that the affair is now settled for April 27, 1899. An account of a symposium, arranged by Miss Pendleton, Chairman of the Entertainment Committee, held at the Drexel Institute, March 26, 1898, shows the trend of the addresses to have been towards the improvement of parks and gardens, their desirability in large cities, and the general advantages that would accrue to Philadelphia should the improvement of the west bank of the Schuylkill River, from Chestnut street south ever become an accomplished fact. The report also included that of the committee on the Smith Memorial, the latter report explaining the methods and conclusions of said committee, and also their recommendations concerning the sculpture for the monument on which there has been considerable criticism. The recommendations were adopted. The Board expresses its usual desire and anxiety to bring the permanent fund up to at least \$100,000 so that the interest on the principal may be made available for artistic purposes in the line of the work of the association. The membership does not increase with the rapidity that is desired, and the Board makes an earnest appeal at the present time, when civic pride is uppermost in the minds and thoughts of Philadelphians, for their active interest and support in this excellent work. Philadelphia has been largely benefited by the work of the association. The retiring trustees were re-elected.

CEMETERY NOTES

At a recent special election held at Utica, Mi-s., for the purpose of levying a three-fourths mill tax for cemetery purposes the proposition was carried in favor of the tax by a vote of 3 to 1. "The world do move."

* * *

Judge Stewart, November 29, confirmed the finding of the auditor in the estate of Annie McGovran, Chambersburg, Pa., by which finding \$5,000 is set aside for the erection of a monument in Cedar Grove cemetery, \$300 for the trustees of the Cemetery Association to keep the burial plot in order and other minor sums, the total making \$6377. The finding was approved by the Supreme Court.

* * *

Gold Bible Hill, the mound where Joseph Smith, the founder of the Mormon faith, claims to have dug up, under celestial direction, the golden plates on which were inscribed the Mormon Bible, is situated on the farm of Admiral Sampson, near Palmyra, N. Y. The Mormons tried to buy the mound in 1893 to erect upon it a memorial chapel, but the Admiral refused to sell.

* * *

Another item showing the trend of public opinion is the following from the *Signal*, of Crowley, La.: "There is over \$200 in hand to be applied to the purchase of lumber to build an enclosure around the cemeteries south of town. The greater part of this sum has been raised through the efforts of the ladies, who now want the men to act and go on without any delay to raise the balance of the money necessary to put a neat fence around 'Gods Acre,' the sacred resting place of our beloved dead."

* * *

Those interested in the Wequetequock cemetery in the town of Stonington, Conn., are making an effort to restore the ancient burying ground. This cemetery has buried in it ancestors of some of the noted men of the state and country, including some of those of General Grant, of Governor Miner of Connecticut and of many well-known judges. About \$700 has been raised to put up a monument to ancestors and to beautify and preserve the grounds.

* * *

A curious interest attaches itself to the following dispatch from Houston, Tex. "Thomas Tinsley, a New York millionaire, who has been for two years in jail for contempt of Court in not producing the books of the Glenwood Cemetery Company, and whose incarceration has been affirmed by the Supreme Court of the United States, has made another effort to secure his release on the ground that the books were not in his possession. The Judge ordered him back to jail, where he will probably spend the rest of his life. It is a case without a parallel in the State."

* * *

The burial ground adjoining the old church in London, where John Whitfield preached, and wherein John Wesley later preached his funeral sermon, has an interesting history, and contains the bones of some 30,000 people, including those of Mrs. Whitfield and the Rev. Augustus Toplady, author of the beautiful hymn, "Rock of Ages." When Whitfield approached the bishop of London to consecrate the ground as a burial place, the latter refused, whereupon the indomitable Whitfield hauled several cartloads of consecrated earth from cemeteries in the neighborhood and sprinkled it over the surface, as an act of baptism, and said it was sufficient.

The employees of the Lake Erie & Western R. R., have raised a fund for the purchase of a tract of ground for a cemetery to be used for the interment of dead railroaders whose bodies are not claimed by friends. Ground was purchased adjoining the city cemetery at Tipton, O., which place is the junction of the two main branches of the road. Funds have also been raised to defray other funeral expenses. All trainmen who meet death by accident on this road will be buried by the employees in all cases where the corpses are not claimed by relatives. This is an innovation in railway circles, says the *Sandusky Journal*, and other roads are likely to take similar action.

* * *

Under the active presidency of Dr. H. Wohlgemuth, the perpetual care idea is making rapid headway among the lot-owners of Oak Ridge cemetery, Springfield, Ill., and several bequests to the fund were reported at the recent meeting of the board. In the president's message to the board he took a decidedly encouraging view of the progress made in this direction. In relation to the subject he said: "Cemetery memorials that are more enduring than the mere sarcophagus, shaft or colossal tombs that mark the place of repose of the dead, noticed by passers-by, are in the thought emphasized by the gifts being made by persons to cemeteries here and there over the country that shall perpetuate and preserve for all time to come the sanctity of the grounds so set apart and dedicated to what is to be the final resting place for all."

* * *

The annual report of the Oakland Cemetery Association, St. Paul, Minn., shows total receipts, including collections on securities falling due, and including balance from last report, \$2,940.28, amounting to \$38,500.97, and expenditures \$38,101.95 leaving a balance to carry forward of \$405.61. Among the receipts are the following: Sales of lots \$6,645, single graves \$1,221.00, interment fees \$1,749.00, tomb fees \$416.50, miscellaneous labor and foundations \$1,149.50; greenhouse sales, \$3,987.00. Among expenditures are: Pay rolls, \$12,341.68; materials for foundations, \$6,565; greenhouse, \$536.77; fuel, \$466.80; general expenses \$1,429.95; greenhouse construction \$495.34. The item for greenhouse construction represents only about one-fourth of work now practically finished. There have been built 4 new houses 11 by 80 feet, with new boiler 48 inches by 12 feet. The principal of the Perpetual Care fund and interest increased during the year \$3,422.80, making a total of \$95,972.99.

* * *

On the subject of embalming a note in a leading daily paper says: The conservation of the human corpse appears to have been brought to a pitch of perfection in Italy which Egyptian professors of the art never in their most ambitious moments could have dreamed of. There is, to begin with, nothing leathery about the appearance of the subject when dealt with by an artist like Dr. Elfsio Manini of Naples. And he does not incise, neither does he inject. He simply submits his subject to a series of baths in a liquid, the composition of which is such as effectually to prevent the decomposition to the end of time. For anatomical purposes, the body may be made to regain all its primary freshness. Let the treatment be carried to a further stage and the subject attains the density, as well as the consistency, of marble. A final process will restore to this deathless marble the softness, the flexibility and even the complexion it possessed when alive.

* * *

Improvements of a very permanent character are being constructed in Forest Park cemetery, Troy, N. Y., the new cemetery on which work was begun in October 1897. The roadways, paths and drainage are being very carefully constructed, and all the necessary equipment has been provided to secure best re-

sults. The Receiving Tomb is built of Barre granite, and is over all 38' 6" × 50', this includes wings in which the catacombs are located. The porte cochere is 19 ft. by 20 ft. The trimmings and corners are hammer dressed and filling rock face. A dome, 21 ft. square rising 5 ft. 6 in. surmounts the structure. The building contains 120 catacombs of various sizes, constructed of Vermont marble with polished marble covers and bronze handles. All walls and ceilings are wainscoted with polished marble. The cemetery is beautifully located and commands some delightful landscape views, including some reaches of the Poestenkill river.

* * *

In contrast with cemeteries conducted for profit it is refreshing to read particulars of the annual meeting of the Cedar Hill Cemetery Association, recently held. The association was incorporated in 1864 and the capital stock was made \$50,000. The funds from cemetery were to be used in meeting necessary expenses for care and enlargement, except such amounts as might be applied to the repayment of the capital, which with interest might be repaid as the corporation should decide. The stockholders have however never asked for interest, and on January 1, 1895, fifty per cent. of the capital was repaid and on January 1, 1898, the balance was refunded to the stockholders. In the words of the *Hartford Times*: "There is no longer a particle of stock in existence in connection with the property. It is now owned by the lot owners, and will be managed by them, the stock having been entirely eliminated. The achievement is one that deserves special commendation. It could not have been effected but for the fact that the stockholders were willing to allow the use of the capital without interest in developing and improving the grounds. In consequence of this record the annual meeting was one of great interest. The original intent of the association has been accomplished. Hereafter the sale of lots will assist in the creation of a fund for the care of the cemetery and for new improvements. The expenses from year to year will also be defrayed from the same general source of income. A new era in the history of the association has been reached," and we would add that opportunities unexcelled are offered for making Cedar Hill an ideal spot in every sense. At the election of officers Mr. Robert Scrivener was re elected superintendent.

The Dead Gardener.

What bloom shall we lay on his fingers cold
Who lieth at length in his shroud.
The blossoms that blazon their beauty bold
Or the shy little wildling that hardly can hold
Its head erect in a crowd?
The lordly lily and queenly rose
He watered and trellised well,
Yet he loved the tiniest flower that blows,
And only the heel trodden daisy knows
Where the dew of his tear drop fell.

—Marion M. Miller in *Criterion*.

The Mayor of Clinton, Ia., in the course of a message to the council vetoing a resolution relating to the erection of a warehouse on the levee, says: "Unobstructed levees, for the transaction of public business, parks and broad avenues perform a useful function. No community should be so short-sighted as to abridge its business facilities or contract its breathing spaces. The tendency now-adays is decidedly for 'expansion.' Cities are everywhere awakening to the necessity of extending and beautifying their park reserves. All up and down the river our sister cities are beginning to appreciate the advantages of river front parks and improved levees. Winona is a marked example. Improvement is the order of the day. The fever of civic pride is

in the air—I hope it is catching, and that we are not immunes. The value to a city of well kept levees, streets and parks cannot be expressed in dollars and cents, yet there is a commercial value attached. The impression produced upon strangers, is one of feeling and cannot be catalogued or listed in an inventory. A community is 'sized up' not only by the character of its buildings private and public, but by the character of its streets, levees and parks as well. The approach to our city from the river should be attractive, and it can be made so." Let the good work go on.

LEGAL.

LIABILITY FOR POISONING FROM ALLOWING POISON IVY TO GROW ON GRAVE.

What will at once be seen to be a novel point for litigation was involved in the recent case of George against Cypress Hills Cemetery. By the verdict of the jury in this case the defendant corporation was held chargeable with negligence in allowing poison ivy to grow upon the grave of the plaintiff's husband, in its cemetery, so that she was severely poisoned by such ivy while she was engaged about the grave in planting flowers.

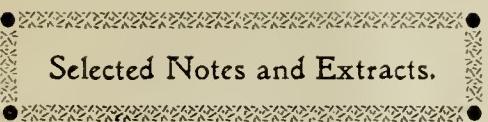
The grave in question was situated in a part of the cemetery described as the "public ground," in which persons buy graves for \$12 each. According to the superintendent's testimony, "the cemetery does not own the soil, but the purchasers buy the graves out and out, and they have jurisdiction themselves over the grave." But the second appellate division of the supreme court of New York says that in this view of the legal relation of the parties, the witness was in error, as it appeared that the plaintiff received a mere ticket of interment. The position of the plaintiff, as the purchaser of the grave, the court holds, was analogous to that of the owner of a church pew. She had acquired the right to use it for a certain purpose, and the right of access to it, under such rules and regulations as the corporation was empowered by law to establish.

Having regard to the control which the law gave to the corporation, and which it actually exerted within the limits of the cemetery, the court thinks its officers and agents were bound to exercise reasonable care not to permit the introduction into the lots, or upon or about the graves, of anything which they knew, or ought to have known, would constitute an unusual source of danger to persons lawfully visiting such lots or graves. Whether poison ivy comes within this class of perils, it suggests, may be doubted.

Assuming, however, that the corporation's representatives in the management of the cemetery knew that poison ivy was likely to be harmful to a considerable proportion of the persons who might be unfortunate enough to touch it, the extent of their duty, as it seems to the court, was measured by the obligation to exercise reasonable care to prevent the presence of the plant about or among the graves. The corporation certainly was not an insurer against its appearance in places where it might do injury. It was bound to do only what an ordinarily prudent person would do to avert danger from this source.

Moreover, while the court maintains that the corporation could not be held exempt from responsibility for the negligence of its agents and servants on the ground that it was a charitable corporation, it reverses the judgment of the lower court against the corporation, because it thinks that the facts disclosed were not such as to render it liable. The corporation only mowing and cleaning up this part of the cemetery once or twice a season, and doing nothing more there except when specially paid to care for particular graves, attention being called to the fact that the court did not deem that the proof would fairly warrant the inference that the ivy which poisoned the plaintiff had been there long enough to justify a holding that the corporation, in the exercise of reasonable care, was bound to know of its presence in that part of the cemetery, though it was known to be in a wholly different locality.

A very lengthy dissenting opinion is filed, and supported by two members of the court, who think that the judgment of the court below ought to stand.



Selected Notes and Extracts.

Four Valuable Shrubs.

Four plants of special value are: *Hydrangea paniculata grandiflora*, *Spiraea van Houttei*, *Cornus sanguinea*, and *Tamarix amurensis*. The *Hydrangea*, with its magnificent white flowers; the *Spiraea*, with its long, graceful, snow-white plumes; *Cornus sanguinea*, with its bright red, glossy wood, and the *Tamarix amurensis*, with its odd, green, feathery foliage, make a combination which cannot be described, and which must be seen to be appreciated.

All of these shrubs are perfectly hardy, easily cared for, and can be pruned or trimmed into almost any shape desired. They are especially adapted to the hardy border, and are valuable and highly ornamental as single specimen plants for the lawn, and are very effective for grouping or general background planting.—*Michigan Fruit Grower*.

* * *

How to Make the *Hoya Carnosa* Bloom.

The following treatment of the *Hoya*, or wax plant, to induce it to bloom after it is one year old, was learned from the late Peter Henderson:

Withhold all water from the plant about the first of March, and do this until the leaves get soft and flabby, and lose their bright green look. No stated time for withholding water can be given. Much depends on the temperature of the room in which the plant is kept. It may be any time from three to six weeks. The owner of the plant must use his own judgment; most persons usually give water too soon, as they fear the death or permanent injury of the plant. The *Hoya* will be found able to stand a good deal of this kind of treatment, therefore do not be in too great a hurry to give water. When you conclude the time has come to end this part of the treatment, put the plant in the sun and give water liberally, and in a short time it will take on new life and send out buds.—*Ladies Home Journal*.

* * *

Pruning Transplanted Trees.

A correspondent in *Mechan's Monthly* for December says: "The question that often presents itself to gardeners at this season is concerning the wisdom of pruning trees and shrubs newly planted at this time," and the editor of that journal replies:

It is difficult to lay down a general rule for these kind of cases. So much depends on the kind of tree, and the spot where the tree is planted.

If we remember why it is desirable to

prune, we may know how to act in special cases.

Where trees die after transplanting, in all cases, whether in winter or summer, it is because the moisture passes from the branches faster than the roots can supply the waste. If cold drying winds in winter, or warm drying winds in summer, are likely to follow the transplanting, pruning lessens the quantity of moisture the roots are to be called on to supply. Hence, if a tree should have poor roots,—or if the earth is not packed tightly about the roots, or if the tree is to be exposed to harsh cutting winds, the judgment of the one in charge as to how to prune, or whether to prune or not, must be founded. It must be remembered that when a party buys a large tree it is always unfortunate that it should have to be cut at all. In a large number of cases, where the conditions noted are favorable, there is no need of any pruning. It is a question for intelligent judgment rather than rule.

* * *

Hydrangeas.

Hydrangeas have grown in popularity for garden purposes, especially *Hydrangea paniculata grandiflora*. The whole class has become quite special in Newport, R. I., chemical and other methods being made use of to effect variety in color. The climate of that part of the country seems especially favorable to their nature. A writer in one of the New York dailies says:

The Hydrangeas of Newport are a sight worth a journey to see. Being a flower that admits of much variety of treatment, this general fancy for them is far from resulting in monotony of effect. Indeed, the variety of these effects is half the beauty of the display, for with variety it gains character and individuality. A man may have his Hydrangeas almost to his taste. He may have them as a bush no bigger than a rose bush; he may have them as a shrub; he may have them as a tree. He may let their foliage luxuriate at will, or he may suppress it altogether, subordinating the whole plant to one or more big and perfect blooms. These, too, he may have in a sufficient and pleasing variety. He may have them in the greenish white, which are familiar; he may have them pink, or with the aid of the chemist and the gardener to "doctor" their roots he may even have them blue. Moreover, he may show his taste in the disposition of the plants. He may dispose them singly or in clumps or in one great mass of heavy-headed bloom. In Newport one sees all these methods tried. And it is interesting to note that where the preference is for the artificially colored blooms the same taste directs the disposition of the plants. These choice products of the horticultural

art are carefully disposed. The plants stand well apart, each one a "specialty" by itself, to be admired rather as an art object than enjoyed as a flower. The more common *Hydrangea* is left to grow as nature meant it. And the result of this is the prettiest effect in all Newport. Dominating the foreground of lawn in front of one of the cottages, in the middle of the deep green oval embraced by the two arms of the drive, is a splendid mass of greenish white blossoms. It must be fully forty feet in circumference, and the tallest heads tower bravely fifteen to twenty feet high, while others, heavy with their own weight, sink down upon the turf. The whole wonderful mass of bloom lies there upon the perfect green of the lawn like a huge bouquet, carelessly but artistically arranged.

* * *

Euonymus Berries.

A remarkably fine specimen of *Euonymus Japonicus*, recently noted, showed plainly its great value in its production of an abundance of scarlet fruit. As a winter effect—the berries contrasting well with the dense evergreen foliage—it is no mean rival of the holly. It is easy to grow and has but one serious enemy—the well-known *Euonymus scale*. This insect spreads rapidly, and, if unchecked, will finally cover the stems. There is no difficulty in detecting it, being white in color, and destroying it by several applications of kerosene emulsions, finely sprayed on the bushes, or by a coating of slaked lime. The dark green foliage is very effective in the summer, as well, and is at its best if protected from the sun in winter.—*Mechan's Monthly* for November.

* * *

Arctic Trees.

A Maine botanist has just received a unique addition to his collection in specimens of Arctic trees that are fully matured, but are only three inches high. They are of exceeding interest apart from their rarity and place of discovery, from their exact resemblance in every detail to the great trees of the same species found in the forests of the United States. For instance, the leaf is exactly the same, and the general appearance of the wood is the very same. One is a small willow, and it is curious to note that the leaf formation and the quality of the sap is the same. One can make a very fair whistle out of the trunk of an Arctic willow, similar to the one the youngster evolves from the twig of the common willow in Maine. The tiny trees came to New England in a recent private Arctic exploration party from Massachusetts.—*New England Florist*.

Association of American Cemetery Superintendents.

ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., President.
WM. STONE, "Pine Grove," Lynn, Mass., Vice-President.
F. EURICH, Woodward Lawn, Detroit, Mich.
Secretary and Treasurer.

The Thirteenth Annual Convention will be held at New Haven, Conn.

The American Park and Out-Door Art Association.

CHARLES M. LORING, Minneapolis, Minn.
President.
WARREN H. MANNING, Tremont Building,
Boston, Mass.
Secretary.
E. B. HASKELL, Boston, Treasurer.

The next meeting of the Association will be held at Detroit, Mich.

Publishers' Department

Park Commissioners and Cemetery Trustees are requested to send us copies of their reports.

Photographs and descriptive sketches of interesting features in parks and cemeteries are solicited from our readers.

Notice to Cemetery Officials.

The publication "Modern Cemeteries" in book form is now ready, and those who had ordered copies should have received them by this time. An acknowledgement of the receipt will be appreciated.

It is to be hoped that this book will be ordered freely as it contains valuable information on cemetery development and management.

Copies will be mailed to any address at 50 cents; please remit with order.

Frank Eurich, See'y and Treas.,
604 Union Trust, Detroit, Mich.

Copies of the Modern Cemetery Wanted.

Prof. L. H. Bailey, Professor of Horticulture, Cornell University, Ithaca, N.Y., desires to obtain the following copies of THE MODERN CEMETERY: Vol. I, Nos. 1, 2, 3, 10, 11; Vol. II., Nos. 1, 3, 4, 5, 9; Vol. III., Nos. 1, 10, 12. Should any of our readers have any of the above copies to spare, Prof. Bailey will be glad to hear from them.

A writer in the Boston *Transcript* says that Mr. Walter Rowlands, of Allston, is to publish a collection of Mr. Howland Shaw Chandler's photographs of curious old gravestones in and about Boston. The photographs are already made; they include those of Major Thomas Savage (1682), Nicholas Upsall (1666), Deacon Jacob Eliot (1693), Mary Goose (1690), Benjamin Thompson (1714), and a great many others. The collection will be valuable not only from a historical point of view, but from an artistic one. The collection of letterings will be a most interesting one. How well, and apparently how instinctively, some of those old gravestone markers understood the art of lettering! It is to be hoped that Mr. Rowlands will receive sufficient encouragement to warrant him in publishing the collection.

Adam R. Smith.

It is sad to record the death by his own hand of Adam R. Smith, for 28 years president of the Oakwood Cemetery association, Troy, N. Y., and up to a year ago, since 1874, cashier of the Union National Bank of that city. He was 72 years age, was a bachelor, and lived alone within the Oakwood avenue entrance of the cemetery in an ivy grown residence, among the plants and flowers which he loved. His housekeeper, who lived in a house near by, had left him on the evening of the 13th of November, as usual, and in the morning in the course of the usual early morning work, discovered Mr. Smith dead in a chair, he having put a bullet through his heart just previously. His work in the improvement of the cemetery was constant, and he possessed one of the choicest collections of orchids in the country. No motive is assigned for the deed, as his character had always been beyond question, but the infirmities of age had advanced rapidly in recent years, which may have unsettled his mental balance.

The mutations of time and fortune make truth oftentimes stranger than fiction. An illustration of this is found in the case of Theodore Schluening, once a well known landscape gardener, who died recently in the Hudson County Alms House, at Snake Hill, N. J., and was buried in Arlington Cemetery, Arlington, N. J., in the paupers' section. He was once possessed of considerable property, which he lost in various enterprises, and became a wanderer, returning to Arlington at intervals. He was born in Russia and claimed to have laid out the public gardens of St. Petersburg. In this country he designed Arlington Cemetery and Arlington Park, Arlington, N. J., and the fair grounds of Atlanta, Ga. He was a highly educated man.

The library of Gottingen has a bible written on palm leaves. There are 5,373 pages, each made of a single leaf.

Things not to be smiled at in themselves may take on a humorous aspect through the manner of their expression. An English paper says. An old country sexton, in showing visitors around the churchyard, used to stop at a certain tombstone and say, "This 'ere is the tomb of Tuinmas 'Ooper an' 'is eleven wivves." One occasion a lady said, "Eleven? Dear me! that's rather a lot, isn't it?" The old man looked at her gravely, and replied, "Well, mum, yer see, it war an 'obby of 'is'n."

FORESTRY IN MINNESOTA. Published by the Minnesota Forestry Association. Prepared by Samuel B. Green, Professor of Horticulture and Forestry in the University of Minnesota.

This a work of over 300 pages, in paper covers, which deserves to be bound in more permanent form. In these days of reaction against the destruction in the past of our forests, when every effort is being made to create a permanent sentiment favorable to the care and preservation of our tree life, such a work is of incalculable benefit. It comprises two parts; the first treats of elementary forestry, in which a fund of educational matter in a remarkably clear manner is presented.

Part II particularizes the trees of Minnesota, which of course in a large way applies to the trees of other like situations. This part is profusely illustrated with diagrams of the component parts of the trees, and the text is concise yet full of information. On looking the work over, in convenience and style, it appeared to be just the *vade-mecum* we would desire to take along into the woods and practically study the trees described. We believe Prof. Green has given us a text book interesting alike to the student and the growing company of tree lovers.

RECEIVED.

ANNUAL REPORT OF THE SMITHSONIAN INSTITUTION FOR 1896. It contains reports of Executive Committee, exhibiting the financial affairs of the Institution; the report of the Secretary, giving an account of the operations and conditions of the Institution for the year ending July 30, 1896, with statistics of exchanges, etc.; and general appendix, comprising a selection of memoirs of interest to collaborators and correspondents of the Institution, teachers and others engaged in the promotion of knowledge. Among the scientific papers in the appendix of particular interest to our readers are: "Color Photography by Means of Body Colors, and Mechanical Color Adaptation in Nature," by Otto Wiener; "The Physical Geography of Australia," by J. P. Thomson, and "The Biologic Relations Between Plants and Ants," by Dr. Heim.

Proceedings of the 22nd annual meeting of the Georgia State Horticultural Society, held at Americus, Ga., August 3-4, last. The report contains an interesting discussion of the Stringfellow method of root pruning and treating trees in transplanting, etc., and papers on the San Jose Scale and other pests, and their remedies, by W. M. Scott, State Entomologist of Georgia, with discussions. There are also reports from various committees.

Annual Report of the Park Department of the City of Cincinnati, 1897. Illustrated with half tones.

CORNELL UNIVERSITY AGRICULTURAL EXPERIMENT STATION. Ithaca, N.Y.
Bulletin 152, October, 1898. Studies in Milk Secretion. Henry H. Wing and Leroy Anderson.
Bulletin 153, October, 1898. Impressions of Our Fruit Growing Industries. L. H. Bailey.

MISSOURI BOTANICAL GARDEN. Ninth Announcement Concerning Garden Pupils. November, 1898.

Public Parks for Iowa Towns. A paper read before the first annual convention of the League of Iowa Municipalities, at Marshalltown, Iowa, Oct. 12-13. By Prof. Thos H. McBride.

CATALOGUES.

The Storrs & Harrison Co., Painesville, O. Bulbs, plants and seeds.

The Care of Plants in the Home and Garden. A handsomely illustrated pamphlet by The Rosary Flower Co., New York City.

PARK AND CEMETERY.

Devoted to Art Out-of-Doors,—Parks, Cemeteries, Town and Village Improvements.

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CONTENTS.

EDITORIAL—EDUCATION AT CEMETERY ASSOCIATION ANNUAL MEETINGS—WOMAN'S WORK IN MUNICIPAL IMPROVEMENTS—RELATION OF MONUMENTAL ART TO LANDSCAPE—PRACTICAL POLITICS IN PARK APPOINTMENTS.....	209, 210
AESTHETIC FORESTRY.....	211
*PROSPECT HILL CEMETERY, OMAHA, NEB.....	212
*A GOOD BEGINNING.....	213
TREES NOT TO PLANT IN PARKS AND CEMETERIES.....	213
ROYAL BOTANIC GARDENS, KEW, ENGLAND, IX.....	214
*DESTROYING POISON VINE.....	216
*BOULDER WORK IN SWAN POINT CEMETERY, PROVIDENCE, R. I.....	217
*MAUSOLEUMS.....	218
SUNDAY FUNERALS.....	219
*GARDEN PLANTS—THEIR GEOGRAPHY, XXXVII.....	220
EARLY FLOWERING BULBOUS AND TUBEROUS PLANTS, III.....	222
CULTIVATING A SENSE OF BEAUTY	223
PARK NOTES..	224
CEMETERY NOTES.....	225
CORRESPONDENCE.....	226
LEGAL.....	226
SELECTED NOTES AND EXTRACTS.....	227
PUBLISHER'S DEPARTMENT.....	228

*Illustrated.

THE propriety, not to say the necessity, of educating lot-owners up to the new conditions controlling modern cemetery practice is being considered with more or less seriousness by all prominent cemetery officials. So many new questions have been brought to bear in cemetery matters, rules and regulations have in very many cases been radically amended, restrictions have been imposed upon the lot-owners and such changes brought about, that to a considerable extent their confidence has been shaken and they are wary of any new suggestions. To reinstate this confidence and to demonstrate that the changes and innovations are for their benefit is the work of the hour. To some extent this has been done, but cemetery officials have not been so intelligently active as they might have been, nor have they adopted means sufficiently educational to impress the average lot-owner with the

advantages of the changes. An excellent opportunity offers for the promulgation of information, and the emphasizing of the importance of it, at the annual meetings of cemetery associations, and to include educational features of a nature to convey an intelligent appreciation of the object of the new order of things, and the advantages to be secured by active co-operation with the trustees and other officials. This could be made markedly effective, by the reading of papers and the encouragement of an interchange of ideas and suggestions between lot-owners and their officers. This too would serve to attract a larger attendance at such meetings, which as a rule are but poorly attended. Too much apathy exists among trustees as well as lot-owners. It is now the period for annual meetings, but there is ample time in the majority of cases for arranging an educational campaign on the lines suggested, or on any lines that circumstances point out as judicious. Some effort in this direction will yield a hundredfold of good results.

THAT the influence of woman in human affairs is far reaching, has been declared in all times where any pretensions to progress have been acknowledged, or her influence been allowed opportunity. Limitations to her activities were, however, so pronounced, that only in certain spheres was the good she accomplished made manifest. In this new age these limitations have in a large measure been entirely removed, so that we observe the arena of woman's usefulness so greatly enlarged, that there are few avenues of effort, public or private, where her footprints are not seen, and even in fields where hitherto man as a governing agent has persistently refused to give her access. This thought comes from a consideration of the growing interest taken by women, associated in societies, in the improvements suggested by park work in some of our large cities. We say suggested by park work, because the term is suggestive of refined improvement outside the limits of park areas; and we have in mind cities like Indianapolis, Minneapolis, and Denver, and more or less the larger ones also. In Indianapolis, for instance, the subject of the planting of street trees, their care, their protection from advertising abuses and injury from horses and other causes, has been taken in hand by an association of women, and the work has been effective. A feature of the work in Denver is the care of vacant property in the city, and this has

been made to serve a double object, the cultivation of the ground and the support of a proportion of the poorer classes, after the Governor Pingree idea. The results appear to have been both excellent and useful. This idea may be made expansive and should be made to include the care by the owners or otherwise of all the vacant lots of a city. There is nothing more detrimental to the appearance of a locality than vacant lots, made the dumping ground for much of the refuse of the neighborhood, adorned with dilapidated advertising boards, and altogether unsightly in the vast majority of cases. It is a matter for municipal authority to control, and this control might include some planting improvements. Imagine the appearance of a partially occupied block, wherein the vacant lots were either clean lawns or lawns adorned with a shrub or two. The expense would not be great, compared with the advance in value of the ground and surroundings, but note the contrast!

IT IS to be earnestly hoped that the pernicious influence of professional politics, as such has been practised in certain phases of our communal life, will soon be a thing of the past in this country. And this will come, and is coming, as an intelligent understanding of the relations between politics and its field of operations is reached. Cupidity, self-interest, ignorance of duty, are among the ruling causes of much of the perversion of right and propriety in the political affairs of today, and how difficult it is to impress upon men, intelligent as they may assume to be, the practical value of such intangible forces, all may have had reason to realize. There has been pretty constant opportunity to criticize the methods and motives of the authorities controlling Chicago's park affairs in the matter of appointments to the office of superintendent, and it may be said with much force that adaptability to the office is about the last qualification demanded of a candidate when a vacancy occurs. And yet the men composing the park boards of the three park districts are "all honorable men," so to speak. There must, however, be something very "rotten in the state of Denmark," looking at the prospective appointment of a plumber to the office of superintendent of Lincoln Park, and that there must be duties attached to the office known only in the secret councils of the order of Park Commissioners. How ridiculous it seems! And what a gross insult to the good sense of a community, whose money they expend, and whose interests they are nominated to safeguard, it is to make such an appointment. Such an official act without further investigation stamps the commissioners as incompetent for their office. It is a consummation devoutly to

be wished that, as in other directions in the great city of Chicago, and for that matter in many of our larger cities, success may attend the efforts of the intelligent citizens to secure faithful and efficient representation on such boards. In our municipal affairs every chance of domination to unrighteous ends should be eliminated from the nominating power, and every possible chance afforded to place upon our park boards men whose only ambition should be to build up the parks in interest to the fullest attainments possible with means and opportunities at command. It is safe to say that only men of taste and enlightenment are fitted for the position, and mere commercial success, already accorded more than its due, should not any longer be the criterion of a man's capacity for a park commissionership, or we shall have more plumbers as park superintendents, from which to judge of the caliber of the park commission.

THE effect of the restrictions on monumental work in our leading cemeteries is far more significant than can be realized by the ordinary observer, but that it is very pronounced may be taken for granted. The larger manufacturers of this class of products report that orders for small memorials are rapidly falling off and that a more refined order of memorial work is in demand. This is the result of the modern plan of cemetery improvement, whereby the stonework is reduced to a minimum and more variety and greater refinement in design is required by the cemetery management. The landscape plan of cemetery establishment involves serious study in relation to this very question of monumental art. That it requires, for its best effects, a minimum of such work is at once apparent, but it is not at once apparent to the ordinary mind that design in this minimum has a very positive relationship to the harmony of the landscape. Study of this phase of the subject will develop its importance and show why in some situations a cross monument would be effective, while in others a sarcophagus would not militate against the general aspect of the section. Or to work the problem out still further, when monuments of other appropriate designs would harmonize with and not interfere with the planting and natural decorative features of the spot under consideration. The question of monumental art in the modern cemetery makes the duties of the superintendent more involved, and necessitates that he shall make himself acquainted with the fundamental principles of the broad art which he is called upon to minister unto, and having mastered the principles to build thereon a broad understanding of the details necessary to beautiful creations.

AESTHETIC FORESTRY.*

"The beautiful must be taken care of, the useful will take care of itself."

It is questionable whether this remark of Goethe's is as true to-day as it was in his time. It seems that we have entered upon a period when the aesthetic aspects of our surroundings occupy us almost to the extent to which the old Greeks were accustomed to develop them. At least a momentum has been set up by the preachers of the beautiful which bids fair to carry us on in that direction with little effort.

Forestry, as a useful occupation, has struggled hard, if not in vain, for recognition in this country, it is practically still an unknown art, and now we are already discussing aesthetic forestry. Forestry is in the first place not one of the aesthetic arts, but an industrial art, the object of which is similar to that of agriculture, namely the management of the soil for the production of wood crops.

Yet the natural beauty, the sylvan charm and woolly flavor of a forest suggest readily the aesthetic element which stimulates our artistic sense.

Even to the forester, whose business it is to grow logs rather than trees, he whose idea of a forest is a mass of trees like a massed army, straight, tall, stripped of all unnecessary branches, cannot close his eyes entirely to the beauties of the object of his industrial activity. Hence, the foresters of Europe who manage forest properties mainly or merely for the money revenue that may be derived from the sale of timber, have in many instances had an eye toward the utilization of the artistic elements at their disposal, at least in some corner of their districts.

In England the artistic aspects of forestry have probably become more prominent than on the continent and the forest management there has become more and more park management. But I believe it has been reserved to our continent to set aside woodlands for the practice of aesthetic forestry merely or mainly, even before industrial forestry has become an established art.

The Metropolitan Park System of Boston comprises such large areas of native woodlands, which it is intended to leave as such, for pleasure purposes, that we may speak of them as forests, in which aesthetic forestry is to be practiced. Not that there are not many other parks in this and the old countries in which groups and small areas of forest growth left to natural development are found; not that many of the forest areas in Germany, for instance, are not used for identically the same purposes of recreation and artistic enjoyment incidentally; not that we have not vast national parks where forestry might be practiced,—but at Boston a conscious attempt at making the aesthetic side paramount on a large scale, is, I believe, for the first time made.

A pleasure forest is, according to my notion, something very different from a pleasure park. The objects are different and the methods of treatment as well. The park is to give pleasure by its artistic elements, the forest by its natural elements. The park exhibits art with a superimposition of naturalness upon artificially created or preserved groups of trees; the pleasure forest relies upon its *natural* naturalness, with merely a helping hand towards artistic appearance. Hence, a let-alone policy is much more desirable in the latter than is possible to permit in the park.

To let nature take its course is here the principle. Yet nature is not aesthetic, she creates many things that are not beautiful and leaves undone many that man conceives as enhancing nature-beauty, for nature works without object, not even the object to please. Hence, the axe and saw are constantly in demand, here to remove a stag-headed tree, that overshadows too much of the progeny, or an old decayed trunk that is not only ugly in its unsoundness but breeds the enemies of the healthy; there a sprawling limb needs lopping, or even a healthy tree or group of trees must be invaded to free a rarer component of the forest which was being choked out by its thriftier competitors.

Variety in composition of the forest pleases, yet the planting tool must be used with circumspection, and since "beauty must be true, good and adequate," any new introductions must be true, good and adequate, that is to say, they must be true to the locality, indigenous, or at least not entirely inharmonious to the main body of woods, they must have elements of form, or other qualities which make their introduction appear natural and desirable, and they must be adequate to the effect desired. If, for instance, coniferous growth is absent, some shade enduring spruces, firs or hemlocks may come in, singly and in groups, or where an opening exists the light-needing pines and larches may find a place; but merely for the sake of variety to plant all kinds in all places is not beautiful in the pleasure forest, because not "true, good or adequate."

Finally, the rational manner of carrying on aesthetic forestry is, after all, that of the German industrial forester, which he practices in those places where a large community makes it desirable to provide for the use of his forest as a pleasure ground, namely, to use the forest for both the material and the aesthetic interests, managing it for wood crops and revenue, with only the incidental reference to the pleasure it can afford, making it accessible by wagon and foot, building up, in rustic manner, springs and shady nooks, with resting places, and combining, as architecture usually does, the beautiful with the useful.

The forester's road system may be none the less perfect from the purely utilitarian view because it meets the demand of art. The bypaths into the depths of sylvan recesses are not less useful because they may be made with due regard to convenient travel and pleasant windings, his thrifty young stock will present aspects of beauty as well as interest to the visitor not less delightful because of the frankly acknowledged purpose which it is finally to serve.

Some of the picturesque effects of the crooked and gnarled specimens of oak and beech, to be but sure, the true forester will reduce to a minimum, in the inspiring sublimity of lofty boles he will substitute other effects not less artistic because the utilitarian object is apparent. Finally, the beauty of a well-conducted forest management, with its system and order in the forest, as well as in the books, will appeal to the thoughtful visitor, and if he finds that all this can be had for nothing, may, with a financial benefit, by which his taxes are reduced, he will bless those aesthetic idealists who, starting from an entirely opposite point of view, have taught him to combine industrial and aesthetic art, pleasure and profit.

* A paper read at the Minneapolis meeting of the American Park and Out-Door Art Association by Dr. B. E. Farnow, Chief of Division of Forestry.

PARK AND CEMETERY.

PROSPECT HILL CEMETERY, OMAHA, NEB.

Prospect Hill Cemetery, Omaha, Neb., is the old city cemetery, consisting of only some 16 acres and situated on the summit of a hill, inside the city limits, and commanding beautiful views of the city itself and the surrounding country.

The grounds are excellently well kept. The old style fences, curbs and other cemetery embellishments of by-gone days are gradually disappearing under the earnest solicitation and influence of Mr. Callahan, the superintendent, and with By-laws, Rules and Regulations remodeled on lines more in harmony with modern practice, this urban ceme-

of the rules. While it is not practicable to bring about a condition of things in the cemetery that should obtain were we establishing a new cemetery, we must take it just as we found it, and improve its appearance so far as is practicable."

The illustration given herewith, while offering a fair general view of the landscape effects on the grounds, also presents a feature that should be of more frequent introduction into our cemeteries—that of a rest or shelter house. This is one of the appropriate subjects for memorials that has often been suggested in these columns, and there are few cemeteries of any area that do not offer attractive



SHELTER HOUSE, PROSPECT HILL CEMETERY, OMAHA, NEB.

tery promises year by year to become a greater ornament to the city which it overlooks, and an attractive spot to its inhabitants.

In the introductory remarks to an illustrated pamphlet giving By-laws, Rules, etc., issued since the Association of American Cemetery Superintendents held its annual convention in Omaha in September last, is the following passage which should inspire confidence in those interested: "To some of the lot-owners these rules may seem arbitrary and may conflict with their idea of what is proper. If this be so occasionally, it is certain that a little time spent in making inquiry as to the reason for the rule, will result in convincing every fair-minded person that the future of the cemetery, its beauty and perpetuity depend upon the strict enforcement

sites for such additions to their permanent improvements. In the instance illustrated the shelter-house appears to stand in a prominent location, and where the grounds occupy a commanding situation as regards the scenic attributes of the surrounding country, it is highly desirable that such structures should be erected where the finest scenery can be enjoyed. In such a case the shelter-house serves purposes not explained by its name. To those personally interested in the cemetery it means not only rest but worship, for who could possibly take rest near the departed without the mind reacting in contemplation, and this would become worship actuated by nature's choice surroundings. The modern cemetery demands that provision should be made for more conveniences of this character.

A GOOD BEGINNING.

The Clematis Jackmanni shown in the illustration is planted at the base of an artificial stump—a far better situation for most vines than at the base of a real stump. It is a section cut from the top of the trunk of the old red cedar tree that stands close beside it. This trunk is also an artificial stump, because the tree grew elsewhere and after being grubbed out, was reset where, in my opinion, it would do the most good.

* * *

Both are placed just outside the walk (though *not* directly in line) that passes along the east side



CLEMATIS JACKMANNI.

of the house from the front to the rear entrance. A walk is an objectionable feature in this location, but one that is sometimes unavoidable. They stand about midway of the length of the building and at the point where the small front lawn merges into an irregular shrubbery border that partly screens the fruit and vegetable garden. The Clematis had been growing for two years (over a large low artificial stump) in its present position before the new "arrangement in stumps" was decided on, and that accounts for the disparity in size between it and the newly set Akebia quinata on the cedar trunk. Next year the rather too "stumpy" and skeleton-like appearance will be overcome, for the short spurs on the trunk will support the twiner as it grows (this season's growth has carried it nearly to the branching limbs), and when it reaches the

forked branches, part of the vine will be led across each of them to an iron rod set horizontally below the eaves of the one-story part of the roof and one at the same level, around the east and south roof of the front porch, which begins just beyond the double window shown in the picture.

* * * *

Together, the vines will furnish an informal arch of flowers and foliage at a point where it will agreeably break the too great length of the side of the house. A desirable result that it seemed impossible to attain by any other means, because no trees are wanted so near the house, and the walk makes shrubbery out of the question. Moreover, the irregular and rather picturesque roof line and general style of the dwelling, when seen as a whole, is in harmony with this somewhat unusual effect of planting.

* * * *

Ampelopsis Veitchii has this fall been set in the narrow border at the base of the brick foundation seen in the picture and which is part of a new addition. A few large leaves that stray into the picture at the extreme right belong to a grape vine trained on a screen bordering the walk on one side, and serving as a background to part of the shrubbery border mentioned. This border outlines the north end and east side of the lawn, and it is intermingled and faced in places with herbaceous plants and annuals that assist the flowering shrubs in supplying an embroidery of color throughout the border from spring until frost. It is a simple, inexpensive design, and easily cared for, yet decidedly pleasing, and until this past spring the only example of its kind in the village.

Frances Copley Seavey.

TREES NOT TO PLANT IN PARKS AND CEMETERIES.

The Locust Tree (*Robinia Pseudacacia*), or False Acacia, is certainly beautiful. Of rapid growth, it makes slender, tall trees within a few years, and the branches are what Gray calls "naked," in that the foliage is loosely and lightly disposed on them, and the fragrant white flowers are in slender depending racemes, pea-shaped and followed by flat seed-pods. Gray says, in his Botany, that "in the Middle and Southern States the Locust-Tree is planted, but in the Northern States has run wild." He might well have said that it escapes culture wherever it grows. Therein lies the objection to it as a tree for parks. The roots are rizoma, running like leather whip-cords in all directions and freely sending up young plants. These younglings are vigorous, and, if let alone, grow rapidly in all positions where a tree may stand. If the main tree be cut, or blown down, for years after these riz-

homa roots live vigorously and send up as many young trees as will be allowed. The writer remembers an old garden, in front of a cottage, that had a Locust in one corner. A wind-storm blew the tree down and it was chopped up, carted off, and the stump carefully extracted from the ground. The occupants vacated the cottage, locked the gate, and no one occupied the place till the war, then prevailing, was over. On the return home, the family found two years' growth of Locusts all over the premises. Crowding the front steps and overgrowing the walk were Locusts. The pinnatified foliage is light and feathery, and the young trees graceful in form, but, out of place, nothing is considered handsome. It was chop and dig on that place for many days to get rid of the volunteer Locusts.

Another tree of still more objectionable qualities is the Cut-Paper Mulberry (*Broussonetia Papyrifera*), which is largely grown all over the United States. It is hardy, free and handsome, acquiring great size, and heavily clothed with leaves that are rough above, downy beneath, serrate, somewhat heart-shaped, and three-cleft and variously lobed. The cut, or serrated, and lobed form varies with almost every leaf, which has given the tree its popular or common name. The objection to the tree is the exasperating power of growth possessed by the roots, and the marvelous vitality of the young plants these rizhomessend up. So far do the roots run, and so large and strong do they grow, that underground, bricked and cemented cisterns, and wells heavily curbed, are upset and ruined by them, proceeding probably from a tree twenty or forty feet away. They run under houses, and if the house is raised sufficiently to show light underneath, the suckers will grow so freely they have to be kept cut down regularly. The writer has lived on a place where the Mulberry furnished grateful shade over a wide expanse of back yard, and in the front yard, or flower garden, has had the gardener to take hold and pull up young mulberries, when from one plant ten yards of fibrous, tough, yellow roots, would be found under the soil. Wherever these roots are cut a junction is formed that produces at once the growth of a sucker, which speedily develops a sturdy sapling.

Nevertheless, it is a popular tree. It is rapid in growth, long lived, and handsome at all seasons, particularly in the fall, when the leaves turn to bright gold color. Calves and cows are fond of the yellow leaves, and so abundant are the leaves that one large tree will feast a cow and calf during the fall. White rabbits (favorite pets of the writer) dearly love the young mulberry sprouts, and as these are not confined to spring, but come up freely

all the year, except winter, are always at hand for the warren.

The rizhma root growth is the objection to each of these trees, for parks. They will be sure to invade surrounding territory and keep a gardener on the watch for intruding suckers.

G. T. Drennan.

ROYAL BOTANIC GARDENS, KEW, SURREY, ENGLAND. IX.

THE TEMPERATE HOUSE.

In contrast to the curvilinear Palm House—the Temperate House is heavier in constructive material. The vertical sides are all glazed between the angled stone pilasters. While rather depressed, the wide span roof is light and strong, and maintains a good architectural proportion between part and part. Rather than continue the wide roof from wall to apex in unbroken breadth, the monotony that would thus obtain is relieved by another vertical glass side half way from outer wall to purlin, and from here the roof continues lantern style to the summit. From this design is taken a three-fold advantage: (1) a reduction of the necessary greater massive and light-obstructing framework to a minimum; (2) utilizing the purlin supports as a gallery walk and overlook, compassing the inside house, and (3) taking the advantage of a vertical side at this elevation for ventilating purposes. The otherwise plain joint at the apex of the house is decorated by a light ornamental fence-like ridging of iron uprights. The entire house, mounted on a wide 6-ft.-high grass terrace, has a broad-side facing, either end having a lower, narrower, and subordinate rectangular wing balanced by well-proportioned connecting octagons. An entrance is provided in the center of the extreme opposite ends of the long edifice, but the main two are located opposite and in the center of the two longitudinal sides of the principal structure. The gables are of a size and ornament in keeping with the expression of the whole house and add to its dignity. In design, it is plain, yet artistic; rich, without tawdriness. It has an architectural expression, and withal instantly commends itself as serving the practical purpose of plant growing, without the sacrifice of individual beauty.

Sir William Hooker, in his annual report to Parliament in 1858, urges the necessity of this large plant house for the reception of the large collection of taller growing tender plants indigenous to temperate climes. In England there had previously existed no large plants of this particular sort that made it possible to estimate what proportions they might attain, and having provided the large one for

the tropical plants it was thought best to pause ere another of similar size would be recommended. It was necessary to appeal more than once. In the crisis, Sir William committed himself to Parliament thus: "I have felt it to be my imperative duty, as conservator of this property, to say, that unless we can commence the needful structure during the forthcoming year, 1859, I cannot answer for the preservation of the remains of this noble collection. We dare not give them larger tubs and more soil, for we should but encourage their growth. Indeed, the largest and finest specimens ought to be planted in the ground." Having made a successful plea, plans were forthwith submitted, *i.e.*, in 1859 the large specimens planted out in the house proves that the argument was wisely and well put.

From the annual report of 1867—we choose to quote from these reports since their scarcity prevents many of our foremost horticultural and botanical libraries from obtaining them—we glean the object in view in planting it:

"By devoting one of the contemplated wings to the plants of our northern colonies and possessions, and others to those of the southern, and rearranging the plants in them by countries, a successive view of the vegetation of those regions would be produced that would be equally instructive to the public and gratifying to the colonist on his visiting England."

It was at one time proposed to have the Metropolitan Railway Station opposite this part of the grounds and in accordance with the idea a very wide gravel walk was constructed leading from the house to the garden bounds, and connecting with "The Avenue"—a public highway extending from the railroad to the garden. On the event of the railway people abandoning the idea, this walk was turfed over and is now a magnificent foreground to the house, in its setting on the border of the Arboretum woods. Relating the effect on the trees of the Arboretum, we learn from the report for 1872 that, "At the time this house was built it could not have been placed further off without destroying many of the finest beeches, chestnuts and oaks in the grounds; as it is, the apparently harmless clearing away of trees for the site of the building, so exposed those on the site it should have occupied that most of them have since been blown down, or been so wrecked that they have had to be removed."

Not until 1881 was any rearrangement of heating apparatus necessary, and then we find that (Report 1-1-'82 p. 7) "a low belt of rock-work, planted with Ferns, Lycopods, etc., has replaced the pipes in the main walk." These pipes were

removed 7 ft. further back on either side and since have continued to give satisfaction.

Mr. Decimus Birton—the architect of the Palm House as well—supplied designs for this house in 1856, and the next year the tender of Messrs. Cubitt & Co. for the construction of the center and two octagons was accepted. The plans called for:

	Length.	Breadth.	Height.
1. A grand center,	212.6	137.6	60
2. Two octagons,	50.	50.	25
3. Two wings,	112.6	62.6	37.9

Principal among the teachings of such a stupendous structure are its details. It is interesting to note that the size of the glass in the grand center is 9 in. x 25 in. In the new wings added in 1897, 15½ x 30 in. was provided.

Throughout, four-inch pipe are used underneath the staging, and encircling the main structure eight pipes are arrayed. All told, twenty-eight pipes extend longitudinally over the surface of the ground. In addition sixteen run under the stage at right angles to these—eight at either end. All the heating pipes are exclusively distributed to within three feet above the ground elevation inside the house. The height to the ridge is 60 feet and an average minimum temperature of 45° is maintained. In the octagons, four pipes extend along the sides and under the stages.

Concerning the large house, ventilation, always in itself difficult to properly attain, has been provided remarkably well, although the ventilating apparatus is crude and antiquated. Approximate'y one third of the glass can be removed in ventilating. At the stage level, ventilating sashes swing on pivots, and are opened by lifting rods. Another tier is elevated on the roof, just above the gallery —these, as those at the ridge, are manipulated by a crank and windlass. At the gallery level another tier of vertical sash are used, every third one being a ventilator. The ridge is a simple broad angle with continuous 14-ft.-wide sash ventilators, opened by sliding down from the top. Twelve crank shafts are necessary to operate those at the ridge alone.

The new rectangular wing is devoted to Mexican plants, such as Agaves, Aloes, Cerei, and other succulents. The temperature is 70°. It is interesting to observe that sixteen pipes lie longitudinally with this wing.

Ventilation is provided for in the Mexican House, at the top, by continuous sash openings on each side of the apical "lantern." Here the entire house is of solid beds. Air is admitted at the sides, just above the surface of these beds, through twenty-six 15½ x 34 in. ventilators.

Four ordinary saddle boilers, with 42 x 18 in. grates, heat the entire range within the large house,

except the single 3 ft. 2 in. wide bounding stage—the entire area is composed of solid beds. A main central walk is interestingly planted with palms and tree ferns and is the most striking feature of the house. Seven walks traverse the length of the house, each embowered with verdure from the temperate climes.

Among the climbers employed to screen the wood work are, *Mucuna macrobotrya*, *Solanum crispum*, *Cestrum Newalli*, *Semele androgyna*, *Lardizabala biternata*, *Asphanopetalum resinosum*, *Hydrangea altissima*, *Myrsiphyllum reticulatum*, *Plumbago capensis*, *Tacsonia tubiflora* and *Volvexmia*, *Buddleia Madagascariensis*, *Bauhinia bryoniaca*, *Acacia leprosa*, *Passiflora leprosa* racemosa, *Geitonoplesium cymosum*, *Melianthus major*, *Actinidia volubilis*, *Muehlenbeckia complexa*, *Stenocarpus Cunninghamii*, *Lapageria rosea* and var. *alba*, *Acacia decurrens*, *Agapetes variegata*, *Passiflora hybrida* var. *floribunda*, *Asparagus falcatus*, *Hydrangea scandens*, *Melodimes Baueri*, *Smilax aspera* var. *maculata*, *Smilax aspera* var. *mauritanica*, *Jasminum subulatum*, *Acacia echinula*, *Cobaea scandens*, *Smilax latifolia*, *Rosa gigantea*, *Tecoma capensis*, *Rubus molucanus*, and *Cianthus puniceus*.

Emil Mische.

DESTROYING POISON VINE.

The reference to poison ivy in the December number of PARK AND CEMETERY leads me to say that in the vicinity of Philadelphia it is one of the commonest vines we have, and is to be found in many of our public parks, if not in some of our cemeteries. There really is but little help for this. Taking Fairmount Park, for example, the greater part of it, the Wissahickon valley, certainly, was natural woodland, and much of it in the same state today. The poison vine is there now as it was always, and this despite many attempts to keep it down. A large portion of the park, especially that which is much used, has been fairly cleaned of it. This vine is very tenacious of life, and this leads me to suggest, the best time of the year, in my opinion, to try to eradicate it. This time is in early spring, just as the leaves are fairly expanded. As is generally understood, much of the true sap which the foliage of the previous year perfected is stored up in the roots for use in early spring. It is used in the formation of new foliage, and when this has been done the most of it is exhausted. The young leaves just expanded have not commenced to perfect sap, and if this vine, or any other plant, be cut down at that time, it receives very nearly its death blow. There may be a little supply of sap left in the roots, which will be employed to continue the struggle, but cut these off as soon as they ap-

pear, and any others that may follow, and it is not likely there would be much trouble the following year. I think the vexing experience many have who try to kill this vine and fail, is because the work is not done at the right time, and because the second crop of shoots is not looked after. With many plants one chopping down is enough, but this vine is such a luxuriant one that it usually calls for vigilance the whole season to get the better of it.

It is better to try the clearance of a fair plot of it at a time than to attempt more than can be attended to. That it can be destroyed in the way suggested, there is no doubt at all.

All trees and shrubs that it is desired to destroy are to be treated in the same way. It is the only

season of the year in which it should be done. To cut them down after the work of the leaves is over is folly, as the roots are then supplied for their next season's work, and strong growth

RHUS TOXICODENDRON.

results when spring comes to wake them to life.

Some botanies make two species of the Poison Vine; one, *Rhus radicans*, and the other, *R. toxicodendron*, but it is all one thing. The one which is met with in the bush form and not climbing, and which is the one the works call toxicodendron, is but a shrub because it has nothing to climb to, just as the Wistaria, the Trumpet Vine, and many another vine, become shrubs under similar conditions. Therefore this, the Poison Vine, *Rhus radicans*, and another rhus called Poison Ash, *Rhus venenata*, generally growing in swampy places, are the only poisonous ones of the whole family. *Rhus venenata* is a small tree, and one of pretty shape, but to touch its leaves or seeds is poisonous to the hand, just as is the Poison Vine.

Leaving out these venomous fellows, there are left some beautiful species for lawn decoration. *Rhus typhina*, *R. glabra* and its cut-leaved variety, *lacinata*, *R. aromatica* and *R. trilobata* can hardly be done without. The lovely scarlet "cones" of fruit on *typhina* and *glabra* would suffice, without the gorgeous display of their scarlet foliage in the fall. And it's a pity that the Poison Vine is resplendent in brilliant foliage at that time also, as it is this that tempts so many to handle it, much to the sorrow of those of them who "take poison," as I do.

Joseph Meekan.



**BOULDER WORK IN SWAN POINT CEMETERY,
PROVIDENCE, R. I.**

Swan Point Cemetery, Providence, R. I., has become known, far and wide, both from the unique features included in its development, as well as the beautiful landscape effects it commands. Rough and uncouth in its natural beauty as it may have remained under other treatment for other purposes, located as it is where glacial drift is a prominent component of its useful area, under the broad and courageous management of Mr. Timothy McCarthy, its efficient superintendent, its embellishment from

boulder boundary wall, illustrated in the accompanying engraving. This has grown to be a permanent object of beauty in the cemetery, and as will be seen gives a distinguishing feature to Swan Point. Along the front and on the wall a profusion of shrubs, creepers and vines have been planted, which have already developed into a mass of picturesque vegetation, and thus will continue to improve under efficient care year by year. The opportunities that the wall has offered for decorative effects have been admirably worked out, nor have the boulders been only used as the foundation for vine and



BOULDER WALL, SWAN POINT CEMETERY, PROVIDENCE, R. I.

a landscape standpoint has been remarkably successful. The scenery is varied, whether one views the grounds from the high land, and notes the high boulders here and there among the shrubbery, made to serve useful purposes in the general effects; or passing to the lower levels gazes around and upward to the previous standpoint. Turn where one will the scenery is ever changing, each succeeding view in the panorama attractive and possessing differing characteristics to demand attention.

Viewing all this and noting the nature of the grounds it would become apparent that so resourceful a landscape gardener as Mr. McCarthy, would soon devise some useful purpose for the lavish supply of boulders confronting him in his work, and so it came about a few years ago that he gained the consent of his trustees to the construction of the

creeper culture, for wherever the faces of the boulders offer suitable opportunities for inscriptions, these opportunities have been carefully conserved by the superintendent. And this idea has also been preserved in other portions of the grounds.

There is now under construction a noble gateway, built of boulders, large and small, in fact many of them weigh between twenty and thirty tons. There is of course a rudeness about such an apparently rough and massive structure, but there is much about the general conditions of the locality to impress a harmony, and moreover, before long, these rugged lines will be softened by the exquisite vines which will run riot from the crevices in which they are planted, and the gateway as a permanent addition will be in time one of most noted features of this beautiful cemetery.

MAUSOLEUMS.

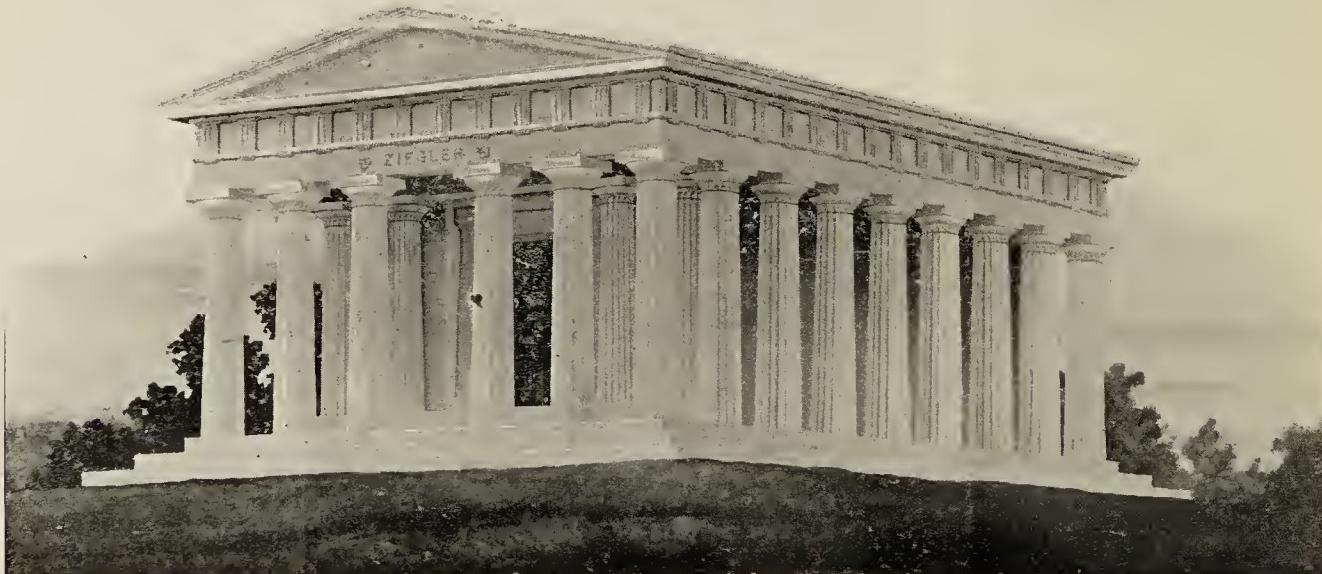
The accompanying illustration of the Ziegler mausoleum, to be erected in Woodlawn cemetery New York, draws attention to the number of such memorials which have been built the past year, and to the increasing demand for this class of mortuary edifices.

The mausoleum is distinctly the monument of the well-to-do, for whether we take the small and unpretentious structures, worthy of the name, costing but a thousand or two dollars, or those recently built at a quarter of a million or more, it is a question of degree of wealth only. And this in a sense may be the criterion of the prosperity of a country since the days of Mausolus, whose tomb at Heli-carnassus was one of the seven wonders of the world.

In design, the mausoleum should be, just as with all other descriptions of sepulchral monuments,

which, however, frequently appears to be overlooked, that a mausoleum is intended to be actually permanent, and consequently that the materials entering into the construction should bear that stamp, both for the interior as well as the exterior work. However, there is such a wealth of permanent ornamental material now at the disposal of the designer that this question of permanency does not affect the possible richness of at least the interior embellishments, as those who have travelled may well understand from their visits to ancient and modern ecclesiastical and mortuary structures abroad. And, moreover, some of the recent work in this country displays the possibilities as regards both American products and American skill.

The mausoleum unquestionably offers a large field to the accomplished designer, especially in the department of ornament. To give some idea of the



THE ZIEGLER MAUSOLEUM, WOODLAWN CEMETERY, NEW YORK.

appropriate not only to the purpose desired, but to the site, and considering that proportion and harmony are two principles absolutely required in architectural structures of this type, it is certain that only such designs should be chosen, as clearly display taste and proportion, and are the product of properly qualified designers.

The mausoleum illustrated, in design a modified Parthenon, so to speak, is a more or less common design, but when situated as the cut suggests, and built on lines as graceful as the great original, is hard to surpass. Such a structure should be a work of art, and should be located on a lot large enough to avoid the contiguity of inappropriate neighbors and surroundings, so that its graceful lines and details may fulfill the purpose of its designer.

Another and most important matter in connection with the design and construction of mausoleums is that of material. It must be borne in mind,

increase in the construction of mausoleums, it may be mentioned that in Woodlawn cemetery, New York, during the past year 16 have been erected at a cost of \$297,000.

The Jay Gould mausoleum in Woodlawn is similar in style to the one illustrated; Mr. Huntington's, the railroad magnate, and many of New York's millionaires have their costly mausoleums in this aristocratic burial ground.

The Ziegler mausoleum will be constructed of Barre granite, and will stand on a lot said to have cost \$35,000. The ground dimensions are 33 ft. 2 in. by 25 ft. 7 in., with an extreme height of 17 ft. 6 in. Rising from the third course and surrounding the inner structure are 32 fluted Doric columns, 9 ft. in length. The interior walls and ceiling will be finished in polished granite with marble faced crypts. It is under construction by C. E. Tayntor & Co., of New York City.

SUNDAY FUNERALS.*

The Law of the Sabbath we will not undertake to discuss; we are not Puritans or narrow. We have come to believe that it is just, that it is "lawful to do good on the Sabbath day," that necessity erases all edicts, and is the supreme law of the individual and of society; and if the Sunday funeral was a necessity (and it possibly may be in some cases), we will concede how very fitting it would be, under the law of necessity, to accommodate the survivors, in assisting in the Sunday funeral as we do; but we have come to know that it is not a frequent necessity. There is no case now, when we know the undertaker's art and their ability to hold back the finger of dissolution, it is not a necessity that the funeral should be held on the Sabbath day, and so we speak against it and I bespeak the unity of the opinions of my auditors. We are all one way.

I do not like the idea of the Sunday funeral on the basis of first principles. It is in contradiction of the traditions of the day. If there is an inappropriate day in the calendar to have a funeral on, it is Sunday. The day is not one erected in token of interment; it is a memorial of liberation and resurrection. The text for the Sabbath is: "He is not here. He is risen." The Sunday funeral contradicts not only the tradition and the institution, but also the purpose of the Sabbath; it is a day given us for holy rejoicing and worship; not a day for dirge and requiems. If we have a funeral day, it ought to be Friday. Sunday ought not to hear the tolling knell, but the peal of triumph, for that is its memorial. The origin and spirit of the Sabbath is wholly against the Sunday funeral, and therefore anybody directing a Sunday funeral is out of joint with the origin of the day.

* * * * Neither is it right to diffuse the congregation—because in our congregation, when there is a funeral on Sunday, there are some that do not go to the regular services because they "must attend the funeral." It is apparent that you who have, upon an average, five or six or eight funerals daily, it is not right that you should be compelled to double your forces on Sunday, and make yourselves captains of operations to break the Sabbath. Neither do I think Sunday funerals should break in upon the calm and sweetness of the cemetery, where some have set aside the day to rest and visit the graves of the departed ones. I do not think the quietude of the cemetery should be broken in upon by the throngs and the din of the Sunday funeral. To come home to myself, if it were my funeral, I should not like for my people to plan and postpone the occasion so that it would come on the Lord's day to be "convenient for so many who would choose to attend." I do not know whether they would choose to attend or not; but they would almost be compelled to, it being made so "convenient." It seems to bring in the commercial thought to arrange to have the interment made between the days we can work, or do business, or go "on 'change," or travel; to take the day closed to business, when we can do nothing else, and go "between times," and then come back and take up the matters of business, or commerce, or frivolity. It seems to me that it takes away the respect that ought to be shown to our

dear departed. Surely we would all better enjoy the thought that when we came to receive the last ministrations—they will rather be few and fervent—a few parting tears from eyes that shed them because they feel the gloom of the light from our eyes gone out forever. I can think of nothing in my ministry that is more a mutilation upon the memory of the departed than some of the Sunday funerals in which I have been compelled to be a sinner, desecrating the Sabbath with others. When I recall the throngs of men who belong to "brotherhoods" (and I belong to about all the brotherhoods they will take me into—I believe in fraternities, and I am going to leave here to enjoy the association of a fraternity tonight); when I think of the braying of bands, the rustle and bustle, shouting of policemen making way through the ranks and crowds, the warning gongs of trolley cars, the interruption of travel and all that—and then know through all the throng there have been few who really had sorrow in their souls, save five or six or eight or ten who gather around the open casket; then I think of you "Cemetery Superintendents," who through the week have looked upon the well-kept hillocks, the trim trees, and cleaned walks until Sunday came, and then when on Monday you look over the wreck and ruin, the debris on the walks, and trodden border flowers, and then your loneliness as, with your help, you straighten up after that great seething mass of people is gone, who came because it was a "Sunday funeral."

I am sure I need not advance to you any arguments; they are entirely patent to you. In order to correct and restrain this abuse, we shall have to be consistent. It is hardly becoming of us to inveigh against the "Sunday funeral," when we have the "Sunday picnic," the "Sunday theater," the "Sunday excursion," the "Sunday baseball," and all that. To be consistent we will have to go the whole way, and I do feel, indeed, that the Sunday funeral is among the least of the desecrations. Let us all try to bring back the Sabbath, once sacred as a day of rest. I am sure that the first part of my address will remain mostly in your memory, and you will recall my reminder of what tender ministrations you serve, and what precious deposits you keep watch over, what sweet solace you visit upon hearts that are broken, and upon eyes that are weeping, and trust—that beyond the vocation of your life, and beyond the dormitories where we shall all lie down to sleep, as the brother said, "We shall all go pretty soon," beyond it all, we shall pass through the city of the dead to the city of the eternally living, and meet in convention there in the great Exposition, where there will be the wondrous works of our Creator and Father to explore, and where there shall be gathered "out of all nations and kindreds," those who have fitted themselves to be at Home. Then I know it will not be as an association of "Cemetery Superintendents," but as Children of our Father, we shall meet, not to discuss or consider the question of "Sunday funeral," but to enjoy the eternal, unending Sunday rest, and unlimited gladness in our "Long, Long Home."

*Extract from an address by the Rev. S. Wright Butler, Omaha, before the Annual Convention of the Association of American Cemetery Superintendents.

GARDEN PLANTS—THEIR GEOGRAPHY—XXXVII.

ERICALES.

THE VACCINEUM, ERICA AND EPACRIS ALLIANCE.

(Continued.)

Ericinella is a small genus of 5 species from South Africa, and the mountains of tropical Africa and Madagascar. *E. Mannii* was introduced to Kew early in the sixties, and flourished there in 1863—three years earlier than some dictionaries put it. It is a humble little thing with light purple flowers, and would probably prove hardy at some point in



KALMIA LATIFOLIA.

Southern California. It is found at the frost line on the Cameroon mountains, W. Africa.

Bryanthus has 3 species, credited to the mountainous parts of North Western America by some authors. They are found in Siberia; one of the Kew botanists stated that the pretty *B. erectus* had been found there a few years ago, but the handbooks credit it to hybridity.

Daboeccia, "St. Daboecc's heath," is a monotypic little pinkish flowered plant found in Ireland and Western Europe. It often grows up from seed in imported peaty soil.

Kalmia, called "laurel," has 6 species of pretty evergreens in North America and Cuba. The Cuban *K. ericoides* has narrow leaves. *K. glauca* vars. extend to Hudson's Bay and California.

Leiophyllum, "sand myrtles," are in 2 species, from the pine barrens and mountains of the Southern states. They are small evergreens with white or pinkish flowers. They prefer moist places.

Ledum has 4 or 5 species in the colder regions of the northern hemisphere.

Elliottia has 3 species, in Japan and the southern U. S. The native species *E. racemosa* is quite sparsely distributed in wet sandy woods in Georgia and South Carolina.

Rhododendron including Azalea as a section, has 170 species, with quite a wide distribution in the mountains of India, Ceylon, Malaisia, New Guinea, and southward to Mt. Bellenden Ker in Australia. The most of such species are sub-tropical, unless from great altitudes, on such mountains as the Himalayas. The hardier species are found mostly in mountainous or hilly localities in Japan, North China, the mountains of Central Asia, the Caucasus, the mountains of Europe, and both the eastern and western United States; *R. maximum* extends to Nova Scotia.

The sub-tropical Rhododendrons are mostly evergreens and such as *R. arboreum* and its varieties become trees of 20 to 35 feet high. The Himalayan forms of this species have a silvery pubescence, but the South India forms known as *R. Nilagiricum* are golden on the underside of the leaves. In color they range from deep crimson through pink to white. The hybrid forms of scarlet and pink shades are largely due to *R. arboreum* var. *Campbelliae*, a form that has proved hardy in several parts of England and even in Scotland. Both it and *campanulatum*, *anthopogon*, *campylocarpum*, *lepidotum*, *fulgens*, *Thompsonii* and several other species should be tried in the "thermal" belts of the southern mountains, and also west of the Cascades on the Pacific Coast, where, perhaps, a large number of hy-

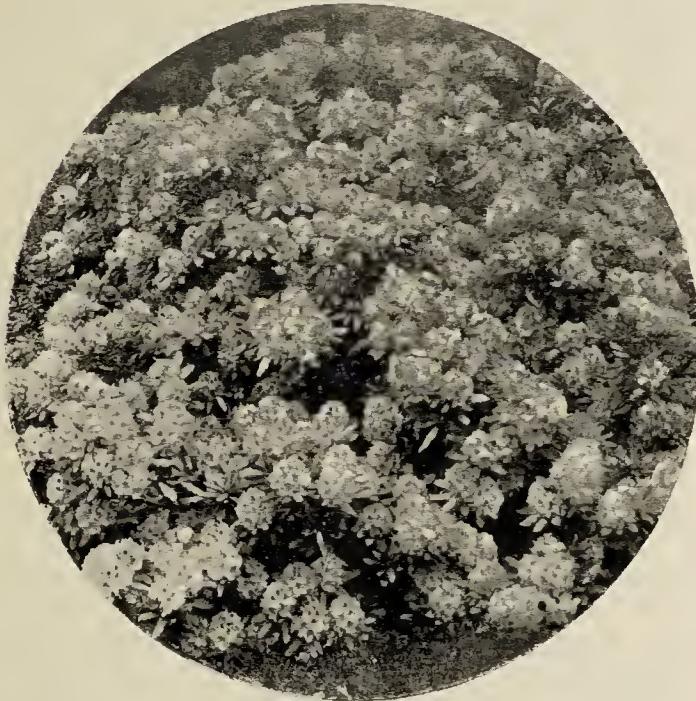
YELLOWISH HIMALAYAN.
Rhododendron Campylocarpum.DULL ORANGE BORNEAN.
Rhododendron Brookeanum.

brids would also succeed. The fact that these species and the Azalea section readily hybridize is not sufficiently appreciated in this country, neither is the fact that the varieties of *R. Indicum* *Kaempferi* are extra hardy and endure even in the southern New England States; *R. ledifolium* is fairly hardy too. My friend, Mr. Ferdinand Mangold, Miss Gould's manager, raised a fine lot of seedlings between various Sikkim species and *R. Indicum* some years ago, but to show that some care is necessary with small seedlings, most of them were lost through the carelessness of laborers during his absence.

Both shading and care in watering are essential.

This is not because they are swamp plants, (for the majority inhabit mountains) but because the seed seems to require excellent drainage, with regular supplies of moisture and shade to germinate. I was many months before I stumbled upon colonies of seedling *Nilagiricumis* growing naturally, and then found them invariably growing on the moss-covered north side of sienite boulders. This supported the practice of my good old masters the Rollissons, who used rough sandy peat and sphagnum in their shallow well-drained seed pans, and kept them near the glass on the north side of a propagating house—shading when necessary.

Then the most of our native species are either woodland plants or grow more or less shaded by



HYBRID RHODODENDRON.

other shrubs. Seed is best sown soon after the new year. More attention should be paid to the prolongation of the Rhododendron season.

R. maximum is native from Nova Scotia southward, and blooms later than most of the hybrids by a month or six weeks. It ought to be possible to select a number of late blooming varieties. Mr. Waterer of Philadelphia once told me that his father threw away thousands of maximum hybrids years ago, probably before an American demand sprung up, for it is certain they would be of great value in the states, even as stocks, for although Mr. Waterer says they are brittle, low working would overcome that objection—if it really exists. There is no doubt about the hardihood of the maximums. As for the hybrids, they are largely worked on *pureponticum*, or *ponticum* blooded stocks of uncertain hardihood, and mulching

and other forms of protection is usually advisable.

The following varieties endured the southern New England climates during severe winters: *Album elegans*, *A. grandiflorum*, *A. triumphans*, Abraham Lincoln, Archimedes, Atro-sanguineum,



RHODODENDRON LEDIFOLIUM—SYN., *A. INDICA ALBA*.

Bacchus, Bertie Parsons, Bicolor, Bluebell, Candissima, Caractacus, Charles Bagley, Charles Dickens, Charles Sargent, Delicatissimum, E. S. Rand, Everestianum, F. D. Goodman, Francis Dickson, Flushing, General Grant, Grandiflorum, Guido, Hamlet, Hannibal, H. Hunnewell, H. W. Sargent, Harry Ingersol, Kettledrum, King of purples,



RHODODENDRON SINENSE.—SYN., AZALEA MOLLIS.

Lady Armstrong, Lady Clermont, Lady F. Crossley, Lady Grey Edgerton, Maculatum, maximum, Mrs. John Clutton, Mrs. Milner, Mrs. R. S. Holford, Neilsonii, occulatum nigrum, old port, purpureum

grandiflorum, Ralph Saunders, *Roseum elegans*, Rosabelle, Sir W. Armstrong, Sir Thomas Sebright.

The colors of these range through many shades of crimson, scarlet and pink; purple, lilac and whitish, variously spotted with darker colors and blotched with some shade of creamy white, yellow, bronze or green.

South of Baltimore along the mountains, nearly all the species and hybrids grown out-doors in Europe may be tried with confidence and even in Florida something may be done with the native form of *R. punctatum*.

Menziesia has 7 species, in North America, Japan and Kamtschatka.

James MacPherson.

EARLY FLOWERING BULBOUS AND TUBEROUS PLANTS, III.

The Ground-Nut, *Ginseng*, *Panax trifolium*, is a low plant with a round, edible tuber, the size of a hazel nut, from which rises a stem bearing three 3-parted leaves and a cluster of small white flowers in April. Pistillate and staminate plants are quite different.

The American Mandrake, *Podophyllum peltatum* is totally unlike the true Mandrake of Palestine, *Atropa Mandragora*. Flowering plants have 2 large, peltate, lobed leaves, bearing a solitary large, over 1 inch wide, pure white wax-like flower between the leaf stems. This flower is rapidly increasing in popularity for cut flowers, and is certainly beautiful. Without doubt it can be forced in greenhouses. Fine for parks. Not recommended for small flower gardens as a rule, as it is better in large masses by itself.

Ranunculus fascicularis, the Early Buttercup, is a very pretty *Ranunculus*, with a cluster of thick fibrotuberous roots, sending up a stem 5 to 8 inches high, bearing several 3 to 5 parted leaves and rich yellow flowers, often semi double, occasionally double. It prefers dry red clay or sand hills, where many things will not flourish, in full sunshine, or partial shade. Flowers in April and early May. Disappears totally above ground shortly after flowering, but like *Osyrum binternatum*, it sends up its leaves again late in autumn.

The Blood Root, *Sanguinaria Canadensis*, is one of our very choicest Early Tuberous flowers,—its large heart-shaped lobed, glaucous leaves, and pure white square flowers, are both very handsome, and it should be cultivated in every flower garden where any attempt is made to grow early flowers, as well as in parks, cemeteries, or other ornamental grounds. Is pretty for cut flowers, but cannot be carried far, as the flowers are too fragile. Likes considerable shade, rich sandy loams. Flowers in April or early May, about one inch square; root thick, full of blood like juice; excellent as an alterative and for neuralgia, but very powerful and to be used in very small doses.

Trentalis Americana, Star Flower, grows in cool, moist, mossy woods; is a very pretty little plant, about eight inches high, with a whorl of lanceolate leaves and one to four very pretty pure white star shaped flowers in May and June.

Nodding Trillium, *Trillium Cereum*. This is a

small *Trillium*, with rather small, white, nodding flowers, having purple stamens, and followed by purplish fruit; not so large and showy as other species, but still pretty.

Trillium Erectum, Beth Flower, grows about 18 inches high, with three large broad leaves and a solitary dark red-purple, strong-smelling flower in May, followed by a large purple, showy fruit. Varieties are said to occur with white or light-colored flowers, but I have never met any variety but *penduliflorum*, with flowers same color as type, but with the peduncle sharply bending down below the leaves, the flower nodding below the leaves. A showy species in damp, rich woods.

Trillium Grandiflorum, Great Flowered Trillium. This is the largest and showiest of our *Trilliums*, one of the handsomest of our native flowers; grows one to two feet high, with three large leaves and a large, solitary flower, pure white, pink, rose purple, and variegated. In Southeast Michigan these flowers range from one to nearly or quite five inches in diameter. It is found growing in damp, rich tamarac or ash swamps, on sandy plains, as well as the highest of hills, usually in the shade. It, however, varies considerably with regard to location where it grows. In deep, rich oak land soils occurs what I have called variety maximum, with rather small roots and the largest flower of any *Trillium* I have ever seen, ranging from three to five inches or more in diameter. This fine plant is suitable for planting in flower gardens, parks, cut flowers, and for forcing in winter. Should be planted out from June to September.

To recapitulate: The following are suitable for general culture; recommended for all ornamental gardening and for forcing; very easy to grow and highly ornamental:

Bicuccula Canadensis, *B. Cucullaria*, *Cardamine purpurea*, *Dentaria diphylla*, *Erythronium albidum*, *E. Americanum*, *Sanguinaria Canadensis*, and all *Trilliums*, particularly *T. Grandiflorum*. All prefer rich, black soils and some shade. For dry, sandy or rich clay lands, hills, etc., *Ranunculus fascicularis* is very fine, would undoubtedly grow anywhere. In cultivation double varieties soon occur, as it is often double when wild. Very pretty indeed. Grassy sands, dry or wet: *Hypoxis erecta*. Sandy highlands or banks, partial shade. *Anemone quinquefolia*, *Anemone thalictroides*, *Trillium grandiflorum*, *Panax trifolium* and *Sanguinaria Canadensis*, also *Erythroniums* and *Podophyllum peltatum*. Rich, shady lowlands: *Alliums*, *Isopyrum binternatum*, *Arisemas*, *Caltha palustris*, *Cardamines*, *Dentarias*, *Erigenia bulbosa*, *Claytonia Virginica*, *Dentaria*, *Trentalis Americana*, *Trillium Cereum*, *T. Erectum*, and *T. Grandiflorum*. In parks a place can be found for all. For cut flowers and forcing, *Arisemas Tryphillum*, *Bicucculas*, *Caltha palustris*, *Cardamines*, *Claytonia Virginica*, *Dentarias*, *Erythroniums*, *Anemone thalictroides*, *Isopyrum binternatum*, *Podophyllum peltatum*, *Ranunculus fascicularis*, *Sanguinaria Canadensis*, (flowers will not bear handling and do not last long, but very fine while they last), *Trilliums* and, perhaps, *Trentalis Americana*, *Anemone quinquefolia*, for the flowers, though comparatively small, are very pretty.

The best of these for cut flowers are: *Bicucculas*, *Erythroniums*, *Trilliums*, *Podophyllum peltatum*, *Dentarias*, *Cardamines*,—balance all good.

Wilfred A. Brotherton.

CULTIVATING A SENSE OF BEAUTY.*

The general subject for the evening is landscape gardening, and in considering it we do not wish to confine ourselves to its mere technical meaning, as the art of forming an artificial landscape—but look at in the broader sense as the art of a right understanding and use of the beauty of that wonderful kingdom which God has created and used to decorate and make beautiful this terrestrial home of ours, and to speak of the art not as of itself an end but rather as a means to the higher end of helping those who come after us into a broader, fuller, better life than our own. It has been said that the strength of a nation is not measured by its natural defenses and resources but rather by the strength of the patriotism of its citizens. * * * The only possible source from which the America of tomorrow can gain such citizens is from the boys of today—and the child laid bare the root of all human progress, who, when a preacher in a tirade against the folly of youth said in a voice of thunder, "What are boys good for?" answered in childish treble, "Good to make men of!" And how our society can help to make noble and patriotic men out of our boys is what we are to talk of to-night.

Among all the sources of human happiness there is none with greater potentiality of pleasure than those which come through our sense of beauty. This ability to feel and enjoy beauty is as truly a part of the gift of life that comes to every child as any other power, and to rob him of it or allow it to perish through lack of use, is as cruel, as monstrous a thing as to rob him of any other gift of God.

Ruskin tells us that every human conception of beauty has its origin in and finds its highest expression in some thought of the Creator expressed in material things. And the ability to in some degree understand and enter into this thought is a gossamer chain binding every child to the Father of us all, and by which it is possible for the child to feel its way out into a fuller understanding of God's love. Often, O, how often these gossamer links are broken because of our thoughtlessness! The startled mother or teacher asks: "But when and how did I fail?" I can best suggest an answer by telling of the little girl who when asked her name, replied "Mary." "But what is your other name?" "Just Mary." "But you must have some other name; what else does your mother call you?" "O, Mary mustn't touch!" What a pathetic comment on the restrictions of that child's life. Can you help a child to appreciate and enjoy Milton or Ruskin by strapping him into a chair and reading to him from those authors. Can you expect a boy to learn to love the garden by keeping him at work with a lawn mower or a hoe when all nature is calling him out into the broader, fuller, freer life of the woods and fields? I venture to assert there is not a dozen children in all this town but what have come to their fathers, mothers, and

teachers, times without number, with some thing, in which they saw some beauty, and have been sent away more or less impatiently, and told not to bother but get his lessons or do his work.

It is said that men value everything in proportion to the difficulty of obtaining it, and there certainty is a sense in which this is true, but all that man holds most dear comes to him as a free gift.

* * * A Vanderbilt may build and shut me out from a Biltmore, but the beauty of the sky, the air, the water, the trees, the flowers are not more his than mine. It seems to me that children instinctively, naturally, see and feel this and the feeling that possession is essential to the enjoyment of beauty never comes but through pernicious influences and always roils and makes turbid the springs of pleasure in the beauty which is everywhere about us. And this is the real cause why we ourselves get so little good from this best of all our gifts, and are so indifferent to developing its possibilities in our children. Why should the fact that yonder elm stands on land to which my neighbor holds the title deeds lessen in the least my enjoyment of the graceful droop of its branches? Why should my enjoyment of the beautiful colors of the lily be lessened by the fact that it grows in my neighbor's meadows or garden? True I may not pick it, nor use it to add grandeur to my dinner table, nor yet take it to the market for sale; but if I truly love it I shall know that nowhere can it be so gracefully poised, be so beautiful as where nature placed it, and so shall have no desire to pick it but shall enjoy it most just where it is and can be most beautiful.

The view given herewith shows the fountain flanked by two good specimens of *Betula Alba*, in Uniondale Cemetery, Allegheny, Pa. In front o



the fountain is a foliage bed on the design of a Maltese cross, composed of *Echeveria* and *Alternanthera*, 17 feet by 17 feet in dimensions. The graceful white birch trees produce charming effects when the fountain is playing.

* Extracts from a paper read by Prof. W. W. Tracy at the recent annual meeting of the Michigan State Horticultural Society, Ann Arbor, Mich.

PARK AND CEMETERY.

PARK NOTES.

The City Council of Clinton, Ia., passed a resolution last month directing the city engineer to prepare plans, specifications and estimates for the parking of the levee. There has been considerable agitation in Clinton looking to the improvement of the river front, of which the city owns some 15 acres. The Mayor, Mr. G. D. McDaid, has been very active in this matter, and has recognized the value and benefits to be secured to the city by this improvement.

* * *

The Biltmore school of forestry, on the estate of George W. Vanderbilt, at Biltmore, N. C., and which was opened September 1st. last, ought to be able to prove the value of its conception and existence. The course lasts for twelve months and is open to graduates of American colleges and of the United States Military Academy, the object being to educate men in scientific forestry.

* * *

The design for the public library building of Oshkosh, Wis., by Mr. Wm. Waters, architect of that city has been accepted by the council. It is of the Renaissance style, the main plan covering 90 feet frontage by a depth of 80 feet, surmounted by a dome. The portico will be 40 feet wide, designed in the Doric order. It will be constructed of Bedford, Ind., stone and will be fire-proof. The library will occupy the lower floor, the second floor being arranged for a museum and lecture rooms. The trustees have a fund of over \$150,000 on hand. Of this \$80,000 was bequeathed by the late Marshall Harris, \$25,000 donated by Ex-Senator Sawyer, and \$50,000 appropriated by the city.

* * *

At the meeting of the Chicago West Park Board of Commissioners held this month, the annual report showed that the income of the department for the year from all sources had amounted to \$623,659.70 and the total disbursements to \$693,500, creating a deficit of \$69,840.30, due to an expenditure of \$80,000 for an electric light plant. This will trespass upon the prospective improvements for the current year. The estimated income for 1899 is \$600,000 and disbursements \$593,500. Considerable work in the way of improvement will be carried out. In South Park affairs, the commissioners of that section of Chicago's parks, have decided upon introducing a flock of sheep to serve a two fold object, to improve the landscape effects and crop the grass, and as there are large areas of lawn, the sheep may earn their keep by saving lawn mowers. They will be cared for by an expert shepherd. The annual report of the South Park commissioners showed a bonded indebtedness of \$406,000. Cash on hand and receipts from all sources to Dec. 31, 1898 aggregated \$603,075.95.

* * *

The town of Marcus, in Northwestern Iowa, has recently purchased a piece of ground for a public park. The land adjoins the fair grounds and is beautifully located, affording a view in each direction of from five to fifteen miles of the finest prairie farms, homes and groves in Iowa. The tract has been platted and laid out by Mr. F. H. Nutter, landscape architect, Minneapolis, Minn. The park and fair grounds comprise a tract of thirty acres, and the architect so arranged his plan as to combine the two. The drive leaving the park connects directly with the fair grounds' splendid half mile track, and the whole makes practically a 30 acre park. Mr. Nutter also replatted all the unoccupied portions of the Marcus and Amherst Cemetery, on the lawn plan, in his combinations of the new and the old parts producing some very happy effects. It is now proposed to lay out a new street which will connect the park and the cemetery.

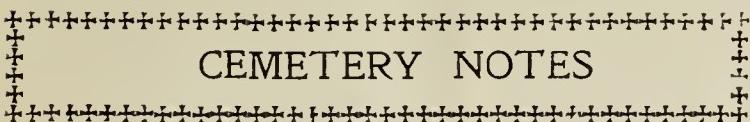
ies, and by connecting also with one of the country highways, will afford a very pleasant drive of about four miles in length, including the principal objects of interest in the vicinity.

* * *

The Park Memorial Tree Association, a society of women of Indianapolis, Ind., have interested themselves says *Municipal Affairs*, "in the improvement of street lawns and shade trees. Through their influence dead and unsightly trees have been removed, living trees properly trimmed, and the hideous work of the advertising fiend has been torn from the trees, telephone poles, bridges and other public structures. Memorial trees have been planted with appropriate ceremonies; the subject has been kept before the public through the press articles and various other means have been used to increase the city's interest and care for its trees. An ordinance in whose construction the association had its influence is now pending. It gives to the park superintendent a partial control of the planting and removal of street shade trees, and it prohibits the placing of advertisements thereon. The association formed a club of boys who were thoughtlessly ruining a fine stretch of street lawn. The boys were consulted regarding plans for its preservation and each was given some specific task for which he was responsible. A more neatly-kept strip of lawn is not now seen in the city, and each of those eight boys holds his head higher, because of the sense of citizenship engendered by the possession of responsibility in the city's improvement."

* * *

Tacoma, Wash., prides itself on its park possibilities. Besides Wright Park, in the town proper, it possesses a natural park comprised by a peninsula, Point Defiance, of 740 acres which juts into the bay north of the city, and which is covered with the magnificent conifers for which Washington is famous. Its shores alternate with level, shingly beaches and wave-beaten cliffs facing the open Sound. The greater part of this woodland is still in its primeval picturesqueness, but for a long distance along the shore and approach nearest the city it has been improved and paths made from the water's edge back into the green recesses of the forest. The scenery is very varied as may be surmised and all the shrubs for which Washington is noted grow in riotous confusion. The Tacoma *Daily Ledger* says the exquisite tasseled flowers of the white "Spirea" fill the entire forest, and white syringia grows wild along the banks. Wild coral honeysuckles and snowy flakes of dogwood blossom form part of her summer offering, and she has given the sowers of fern seed "carte blanche." It is reached by the City Park car line, which makes half-hourly trips from the city, six miles distant, and excursion steamers ply along the shore. Almost in the center of the city, is Wright Park, a garden of delights. The grounds, twelve blocks in area were given to the city by the late C. B. Wright, of Philadelphia, and were laid out by E. O. Schwager, the well-known landscape gardener. On one side a high terrace extends the full length of the park, commanding a broad view of the green slopes below and the residence district of the city beyond. These heights are imposingly planted out with evergreens and other material. On a bold promontory overhanging the lawns stands a winged Mercury, the gift of Col. C. P. Ferry, who also donated the colossal lions which guard the entrance of the carriage drive from Sixth avenue. These figures are copies of the famous lions of Brussels. At the other end of the drive Canova's dancing girls welcome the visitor. The lower meadows of the park are dotted here and there with groups of trees and ornamental shrubs in endless variety, and from early March until December there are bright flowers in the beds, and in the spring the slopes are all afire with the golden Scottish broom. In the center are two little lakes peopled with flocks of ducks and snowy swans and a rustic bridges spans the strait between the two lakes."



CEMETERY NOTES

In memory of her father, the late Rev. Daniel Frost, Miss Louise Frost has presented the Dayville cemetery, Dayville, Conn., with a new boundary fence, a great and needed improvement.

* * *

The government now cares for the graves of 337,296 soldiers in 83 National cemeteries, and it is not expected that the cost of establishing a few more to carry out the president's proposition to include the confederate dead, will increase the army appropriation bill to any very appreciable extent.

* * *

English circles in Italy and at home are greatly stirred over the Italian government's intention to cut a new road through the Protestant cemetery at Rome. If carried out the line of the new road will take the grave of the poet Keats. Vigorous efforts are being made to prevent the "improvement." If these fail of success the poet's remains will probably be sent to England for re-interment.

* * *

The closing of certain cemeteries within the city limits of San Francisco, and prohibiting burials therein, has been the cause for acrimonious debate for some time. There appears however to be an obvious necessity for such action if the progress of the city is to remain unimpeded. The Board of Supervisors have recently adopted a resolution ordering certain cemeteries closed to further burials after January 1, 1902. This will give ample time for arrangements to be made by all interested individuals.

* * *

The mayor of Taunton, Mass., in his recent address to the council, made the following gratifying remarks: "An act relative to placing the public cemeteries in the city of Taunton under the control of the park commissioners, was passed at the last session of the legislature, subject to the general laws relating to cemeteries, and in consequence thereof, said commission has had the exclusive control which formerly belonged to the committee on public property. The result obtained under the present method of procedure is satisfactory in the highest degree."

* * *

In an interesting history of the parish the Rev. James Murray of Kilmalcolm, Renfrewshire, Scotland, mentions that "amid the enjoyments of the people we must not fail to notice funerals," and he calls attention to a curious custom which was prevalent in connection with them. It appears a sieve containing clay pipes filled with tobacco was handed round just before the cortege started. Then the mourners smoked, and when the kirkyard was reached, as the grave was being filled, each stepped solemnly forward and cast his pipe "among the moots."

* * *

By the death of John J. Fayel, who died recently in South Dakota, the town of Theresa, where he was born and attended public school, receives valuable bequests, amounting to a third of his estate. Of this \$7 500 is to be devoted to defraying burial expenses, the purchase of a lot and the erection of a monument. \$5,000 is left to the Theresa Cemetery Association for beautifying the said cemetery, and the residue after paying small legacies is to be expended by the executors for the purpose of creating a public library or a public school in the village of Theresa as the executors shall deem best.

* * *

The National Manufacturers' Association, of Philadelphia has received a letter from Caracas, Venezuela, asking that Penn-

sylvania architects and iron manufacturers be invited to send proposals to C. racas for the construction of an absolutely unique iron cemetery, to accommodate 25,000 bodies at the outset, and to be constructed in that city. Venezuela is a flat country in that vicinity, and the stone graves in which bodies are buried above the surface are not waterproof, but are decidedly leaky. So the Venezuelans want to see what could be done toward securing an iron graveyard constructed in sections in this country and put together at Caracas. They want the cemetery built in the form of a square, with ornamental iron base and an attractive railing around it.

* * *

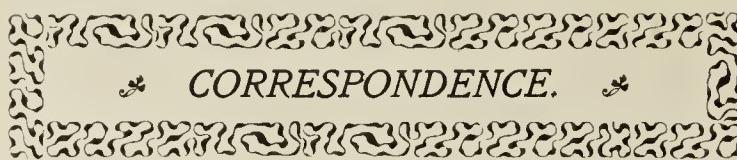
Canon Greenwell, of Durham Cathedral, England, has just finished the curious task of piecing together the coffin of St. Cuthbert. This shrine of the great Saxon saint was despoiled by the Commissioners of Henry VIII, and the body, which was found to be intact, was reburied in its original coffin in the nave of the church. In 1827 it was again dug up by Dean Hall, who was anxious to verify the condition of the body. On this occasion the outer coffin was broken up and thrown aside. The fragments were, however, eventually saved, and have for many years been preserved in the Episcopal Library. Canon Greenwell has now put these hundreds of pieces together, with the result that it is now possible to decipher rough drawings representing St. Cuthbert, the four Evangelists, the Virgin and Child, St. Michael the Archangel and the Crucifixion, which were rudely but deeply carved upon this interesting relic of Saxon art in the year A. D. 860.

* * *

In the course of his annual address to the Boston City Council, and speaking of the old cemeteries of Boston, the mayor said: "This department found on assuming charge of the old burial grounds of the city that no records of any value or importance existed in connection with them. Since that time the department has been copying the inscriptions on the old stones, inquiring into the ownership of tombs, and searching into public and private records in reference to interments and burials in the old cemeteries. This work has substantially been completed so far as the search for information is concerned, and the department is about to classify this information, so as to be available to the public, in the form of a card catalogue. This will be a complete record, so far as the same is obtainable at the present time, of matters pertaining to the old cemeteries of the city of Boston." Plans have been submitted for a new chapel for Mt. Hope cemetery, the stone for which is being quarried in the cemetery, and the entrance is to be changed and improved.

* * *

The Court of Appeals has handed down a decision in the case of Martha E. Seymour versus the Spring Forest Cemetery Binghamton, N. Y., a matter which has been in litigation for ten years. It appears that the association issued bonds to the amount of about \$15 000 which came into possession of the plaintiff and the trustees used the money received from the sale of lots for improvements and other necessary expenses, and not for the payment of the bonds, as it was claimed had been agreed when the bonds were issued. It was afterwards found that there was no way of getting the money from the association, because about all the lots are sold, and an action was commenced against the trustees personally, on the ground that they had misappropriated the funds. The Court of Appeals held that the trustees had acted in good faith in the expenditure of the moneys, and cannot be held personally liable. So it finally comes about that Mrs. Martha E. Seymour, cannot enforce her claim against the cemetery, because it has nothing with which to pay, and cannot enforce it against the trustees because the courts hold they are not liable.



LYNN, MASS., Janaary 2, 1899.

Editor Park and Cemetery:

DEAR SIR:—Our convention at Omaha is numbered with the past. We missed there several members who are in the habit of attending, but we hope to see them at New Haven this year. Our meetings were very interesting, and of course beneficial. On our return home we stopped a day in St. Louis, and visited the Shaw Botanical Gardens; we were well paid for our visit, being fortunate in having the services of a young student to show us around.

As I sit in my office looking out upon the snow-clad hills, I think what a fitting time to plan the work that will come again in a few short weeks, and also to plan and think of the future of our association and the good it is destined to do. I have often thought what a pleasing feature it would be at our meetings to receive a letter from every member who could not attend, advancing some idea, or asking some question, thus taking part in the meetings, and encouraging those who are there, by convincing them that, though absent, their interest had not abated. These winter days, when we cannot work about our grounds, we have opportunity to store our minds with useful thoughts. These thinking days are as valuable as the working days. If this paper meets the eye of any cemetery officials who have never sent their superintendent to a convention, please send them next year, and watch them when they get home with their brains polished up, and see them bustle about endeavoring to get out of ruts they didn't know they were in. If there is a superintendent who has not attended because he knows it all, please come and get a few new ideas, and subscribe for PARK AND CEMETERY.

William Stone,
Superintendent Pine Grove Cemetery.

LEGAL.

LIABILITY FOR CUTTING TREES ON CEMETERY LOT.

The question of liability in damages for the cutting of trees on a cemetery lot was certified to the supreme court of Wisconsin, in the case of Hollman against the City of Platteville, and a decision rendered in November, 1898. In 1845 the town of Platteville acquired a tract of land for cemetery purposes, possession and control thereof afterwards passing to what is now the city of Platteville, said cemetery being within its limits. The cemetery was never platted and no deeds or written burial permits were ever made to any person. Nor were any rules or regulations concerning the cemetery ever made by the authorities in charge; and no money was ever paid for the privilege of burial in said cemetery, it having always been the custom for persons burying dead in the cemetery to select for that purpose any unoccupied ground within the cemetery, without paying therefor. In 1866, the plaintiff's mother was buried in the cemetery, according to the foregoing custom. In 1867, he inclosed the grave of his mother and those of two of his sister's children, previously buried, and sufficient ground east of said graves for another row of graves, with a fence, and planted four evergreen trees within the inclosure. Subsequently, other relatives were buried therein. Then, after it had remained there for about 20 years, he removed the fence, and one of the trees was removed by his sister's relatives. But from the time he fenced off the lot he cared for and attended the same, and claimed it as a family burial lot.

In 1894, the city, by its servant, in the course of general improvements of the cemetery, for which money had been appropriated by the city, removed the three remaining trees, without notice to the plaintiff, and, as the jury found, in the suit he brought for damages, to the damage of the lot \$50. Was the

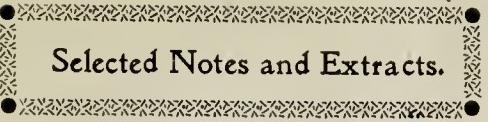
judgment for damages for the removal of said trees supported by the facts above stated? The supreme court answers this question in the affirmative.

As the supreme court views the case, it was unnecessary to determine whether the plaintiff had legal title to the lot or not, it mattering not, for the purposes of the case, whether his right to the lot be considered a mere privilege, right, or easement for the burial of his dead, or whether his rights had ripened into absolute title by adverse possession. Some courts go so far as to hold that such an easement, as well as title to the soil, may be acquired and perfected by prescription (or adverse possession for a certain length of time), the right to which cannot be defeated by the owner of the soil. Others say that where the interment is in a public cemetery, when the parties whose duty is to give burial are not the owners of the soil, they would have no higher right than a mere easement or license. In any event, says the supreme court of Wisconsin in this case, so long as the license continued, the lot holder could maintain trespass for any invasion or disturbance of it, whether by the grantors or strangers, and it reiterates that the plaintiff, having a right to and the possession of the lot in question, could certainly maintain an action against any person who unlawfully disturbed or interfered therewith.

But, the city argued that section 1439 of the Revised Statutes of Wisconsin of 1878 gave the right to the common council to regulate the cemetery, as trustees, and that their action in that regard was semi-judicial, and ought not to be interfered with. The supreme court replies that a perfect answer to that contention is found in section 1453, which grants the power to require any "lot owner or occupant to remove, rearrange, rebuild or repair, any such trees or shrubs planted, fences, structures, headstones or monuments so as to comply with such regulations as they shall have prescribed, by giving reasonable personal notice in writing so to do"; and, if they fail to do so, they may cause it to be done, and recover the expense thereof from the person liable to such duty. This, the supreme court holds, presupposes the adoption of proper regulations for the management and control of the cemetery, which seems not to have been done in this case. Neither was there any pretense that any notice was given the plaintiff to rearrange or remove the trees in question. Consequently, the court holds that the acts of the city were wholly without the lines of the statute, and without legal justification therefrom.

Again, it was urged that the city was engaged in an act for the public benefit, in which it had no particular interest, and from which it derived no special advantage in its corporate capacity, and that therefore it could not be held liable for damages. Still, on this point, the court again holds against the city. The supreme court says that the city had a right to adopt reasonable regulations for the management and control of the cemetery. It also had the power to enforce its regulations in conformity to the law granting such power. But it had no right to disturb or invade the possession of the lot held by the plaintiff except in pursuance of its statutory authority. Its fault lay in the attempted exercise of its statutory powers in an unlawful manner, and, having authorized the act done, and having adopted the wrongful act of its servant, as appeared by its answer, the supreme court insists, the city must be held liable for the actual damage done.

It behoves one to be very careful in the wording of documents likely to assume legal proportions, as the following will suggest: By a decision recently handed down in the Orphans' Court, the Lutheran Church at Greencastle, Pa., will get a \$600 fence around its graveyard. In January, 1890, Mary Diehl, set apart \$600 for this purpose. She died in 1896. Her relatives insisted that the paper containing the gift of the \$600 was not testamentary in character and they appealed from the decree of probate to the Court. The decedent had written "I have given (not bequeathed), \$600 or more if necessary," for the purpose. The Court holds that the words "or more if necessary," give the paper testamentary character, assuming that if the amount set apart was not sufficient, there would be a debt on the estate.



Selected Notes and Extracts.

Disturbing Nature's Balance.

The great and growing cost of the attempts of Massachusetts to exterminate the gypsy moth shows how serious may be the consequences to "the balance of nature" by the introduction of foreign insects or animals. A few of these moths were imported some years ago by an entomologist living near Boston, says the *New York Times*. Several of the captives escaped from custody, and the state has spent \$450,000 in the last four years in a vain attempt to exterminate their descendants. It is now estimated that at least \$1,575,000 will be required, and that the appropriation for five years to come should be \$200,000 per annum. On the other hand, a perpetual appropriation of \$100,000 per annum would serve to confine the moths to the district in which they are now found. The problem resembles that which has taxed the resources of the Australian colonies since the progeny of half a dozen rabbits, imported from England, became so numerous that the maintenance of agricultural industries was menaced by their depredations.

Australia has expended millions in rabbit-proof fences and in devices for killing off the rabbits. But, although bacteriologists have endeavored to remove them by disseminating the germs of fatal disease, the colonists have so far been able to do no more than hold the animals in check. In Florida several rivers have recently become choked by the rapid growth of a kind of hyacinth imported a few years ago, and considerable expenditure will be required to keep the streams open for navigation. An imported insect called the black scale menaced the fruit industry in California until the state procured from Australia and introduced in the orchards a little beetle which ate the obnoxious insects, and thus brought relief.

These and other instances which might be cited show that the utmost caution should be observed with respect to the introduction into any country of insects or plants for which nature has made no preparations there, and the growth of which may not be restrained by natural enemies and checks with which they must contend in the countries from which they are brought.—*New England Florist.*

* * *

Bed for Rhododendrons.

The rhododendron, when grown successfully, is one of the most beautiful of all ornamental flowering shrubs, but under unfavorable conditions it is exceedingly disappointing. It frequently occurs that sufficient care and forethought are not

given to the preparation of the beds to receive it. The rhododendron possesses numerous small, hair-like fibers—in fact, it has no strong roots to speak of—and these small rootlets require air as well as moisture and nutrition.

To prepare a bed such as the rhododendron will best flourish in, dig out the earth to a depth of three or four feet; fill the bottom with stones, to afford good drainage, and the balance with good top soil, sand and well rotted cow or stable manure, all thoroughly mixed—about one-half soil and one fourth each of sand and manure. If the soil be partly or wholly of sod, it will be all the better with the addition of the sand. After the plants are set in the bed, the surface should be covered with from about four to six inches of stable manure. This acts as a mulch, and serves to keep the roots of the plant cool and moist during the heat of summer and prevents frost from penetrating deeply in winter, both of which will result in increasing the health and vigor of the plants.

Azaleas, Kalmias, Heaths, Andromedas, and, in fact, all ericaceous plants, delight in a light, porous soil, and in planting them, says *Meehan's Monthly*, which is authority for the foregoing, the beds should be prepared in the same manner as for rhododendrons.

* * *

Pruning Flowering Shrubs.

The pruning of any flowering shrub should never be undertaken without a knowledge of its flowering character. The average jobbing gardener trims shrubs like the barber does hair—grasps the tools, shuts one eye, and makes a clean even cut of every piece that stands out further than the rest beyond a determined height. This is done in winter, and if the subject be a hydrangea or an althaea, no absolute harm is done, while any early flowering shrub, like the lilac, deutzia or mock orange, is at least partly relieved of flowering wood.

To get the best flowering results and clean growth from shrubs, they should be pruned annually from the time they are set out. The early flowering kinds should have all two year-old wood removed during the winter, as the next summer's flowers are to be produced on the one-year-old or past season's growth. Just how to distinguish old from new wood is best learned by examination. Among easy ones to distinguish are the deutzia and mock orange, the new wood of which is bright and smooth, while the old is dull in color and rough, and in the case of the deutzia, lilac and weigela, the old flower stalks remain. These old shoots should not be just trimmed, but cut right out, leaving only the new shoots and permitting entrance of air and light.

After blooming in the spring, the woop that has flowered may be pruned slightly to induce strong young shoots. This frequently gives a second crop of flowers in the fall.

Besides those mentioned are the following that bloom early, and must be treated as described: forsythia, flowering almond, sweet shrub, cornelian cherry, kerria, *Pyrus japonica*, *halesia*, bush honeysuckle, snowball, etc. On the other hand, fall-blooming shrubs should be cut in closely during winter, to induce an abundance of heavy new wood on which the flowers will be borne. The althaea, hydrangea, chaste shrub, hypericum, caryopteris, etc., are to be treated in this manner. The closer they can possibly be pruned, the better the growth and larger the flowers. As an example of the benefit of this pruning, take two plants of hardy hydrangea, trim one closely and do not touch the other. The immense panicles on the pruned one will quickly show which is the best method.—*S. Mendelson Meehan* in the *Florists' Exchange*.

* * *

The Clematis.

The clematis, in its many varieties, is one of the most desirable of climbers, being capable of use in a great variety of places. The small white flowering kinds, like paniculata, *Flammula* and *Virginica*, bloom in great profusion and the flowers are fragrant, the last two blooming about midsummer and paniculata in September. The larger flowered varieties continue to bloom over a longer season, in fact, all summer. *Clematis Jackmanni*, with violet purple flowers, is a large flowered variety that has been most planted, for the reason that it has proved to be the most vigorous and free blooming. *C. Henryi* is the best of the large white flowering kinds, but there are numerous varieties, of different colors that are desirable, and these are gradually finding their way into our gardens. All varieties of clematis need some kind of support to be kept upright, otherwise they run over the ground, or rocks and bushes and fences. A wire trellis suits them admirably when trained by a porch or at the side of a walk, the leaf stems, coiling around the wires, taking a firm hold. Some varieties of clematis, those of most continuous bloom, have been employed with much satisfaction for bedding, running on the ground or over beds of rocks. Some of the best effects with clematis on porches or walls may be produced by planting colored or white varieties together, allowing the stems to interlace and mingle their flowers naturally. *C. Jackmanni* planted with *Japan Honey-suckle*, *Lonicera Halleana*, is productive of a fine effect, as both bloom together all through summer.—*Vick's Magazine*.

Association of American Cemetery Superintendents.

ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., President.
WM. STONE, "Pine Grove," Lynn, Mass., Vice-President.
F. EURICH, Woodward Lawn, Detroit, Mich.
Secretary and Treasurer.

The Thirteenth Annual Convention will be held at New Haven, Conn.

The American Park and Out-Door Art Association.

CHARLES M. LORING, Minneapolis, Minn.
President.
WARREN H. MANNING, Tremont Building,
Boston, Mass.
E. B. HASKELL, Boston, Secretary.
Treasurer.

The next meeting of the Association will be held at Detroit, Mich.

Publishers' Department

Park Commissioners and Cemetery Trustees are requested to send us copies of their reports.

Photographs and descriptive sketches of interesting features in parks and cemeteries are solicited from our readers.

Notice.

Owing to the annoying disappointment in not receiving the stenographic transcript of the Omaha proceedings until some time in December last, the printed report was correspondingly delayed.

The same is now ready and may be procured at rate of 50c. per copy.

We wish to call attention again to the book MODERN CEMETERIES, which should be in the office of every cemetery, and in the library of every cemetery official.

The book will be mailed at rate of 50c. per copy. Please remit with order and acknowledge receipt of book.

*Frank Eurich, Sec. & Treas.
604 Union Trust Bldg., Detroit, Mich.*

In the November issue an item appeared stating that Mr. Salway had resigned his position of Superintendent of Spring Grove Cemetery, Cincinnati, his son succeeding him. This information came from a number of press clippings, showing that the statement was quite generally distributed. It was a surprise, therefore, but a matter of sincere gratification to receive the following in a communication from Mr. Salway himself: "I desire to say that the statement is entirely without foundation. I have no thought of giving up; in fact my duties are more numerous and press harder upon me with each succeeding year, and my health is perfect; consequently there is no reason why I should resign." Mr. Salway is one of the most successful cemetery superin-

tendents in the United States, and it is a pleasure to note that he will continue in the position that he has filled so creditably for many years.

Mr. George H. Scott, formerly Civil Engineer and Superintendent of Rosehill Cemetery, Chicago, now occupies a similar position in Elmwood Cemetery, Chicago, having severed his connection with the former association. This new cemetery comprises some 375 acres situated eight miles from the City Hall, and it has been in course of preparation for two years past. It is to be conducted on modern lines, and many improvements are promised.

Mr. John Butts has been appointed superintendent of Oakland Cemetery, Sandusky, O., to succeed Mr. Fred Philby, he having refused to again accept the office at the salary fixed by the Board under the new rules adopted some time since.

John H. Damuth, Assistant Superintendent, Woodland Cemetery, Dayton, O., who expired suddenly a few weeks since while in a downtown store, had held the position for twenty years. He had the confidence of all who knew him and was much respected.

Major R. C. Taylor, who has been Superintendent of the National Cemetery in Pineville, La., since President Cleveland's last administration, is now in charge of the National Cemetery at Natchez, Miss. He is succeeded by J. B. Erin, of Missouri. This is in the nature of a promotion for Major Taylor, the pay being more, as the station to which he has been assigned is a first grade.

A bill granting to the city of Saginaw, Mich., the privilege of beautifying and using as a public park such part of the post office property as may be deemed unnecessary for post offices has been passed.

Mr. John A. McNair, Superintendent Cypress Hill Cemetery, Petaluma, Calif., is a strong advocate of burial reform. He writes:—"Burial reforms should be advocated. Wicker work receptacles, and 'earth to earth' mixed with a little quicklime, is the best cremation and purifier—economical and sanitary. The present custom is to put bodies in (pickle) a strong box supposed to be tight, which tends to arrest nature's work of 'earth to earth' from whence we came. I would suggest doing away with the old coffins and boxes, and return to the ancient custom."

RECEIVED.

The Lord & Burnham Co., Horticultural Architects and Builders and Manufacturers of Heating Apparatus and Greenhouse Fittings, of New York City and Irvington on Hudson, have recently issued two handsome catalogues, the one containing half-tone illustrations of a large number of horticultural buildings constructed by them; the other, illustrations, descriptions and prices of the heating and ventilating apparatus, fittings and various appurtenances manufactured by the firm. The Lord & Burnham Co. have gained a wide reputation in this line of special work, and are the inventors and patentees of a great number of its valuable details. These two catalogues afford a large amount of information on greenhouse work, and readers contemplating conservatory or greenhouse construction should write for them.

ANNUAL REPORT of the Trustees of Oakland Cemetery Association, St. Paul, Minn.

CORNELL UNIVERSITY AGRICULTURAL EXPERIMENT STATION, Ithaca, N. Y.
Bulletin 154. Tables for Computing Rations for Farm Animals. By J. L. Stone.

Bulletin 155. Second Report on the Effects of Kerosene on Foliage. By H. P. Gould.

MAINE AGRICULTURAL EXPERIMENT STATION, Orono, Me.

Bulletin No. 46. Ornamental Plants for Maine. By M. W. Munson. The ornamentation of rural homes is of importance to the people of Maine, not only as a means of adding to the comfort and pleasure of the home life, but as an attraction for the increasing numbers of summer visitors and as means of enhancing the value of farm property. Prof. Munson has given a list of trees, shrubs and herbaceous plants which have been grown at the University of Maine and which have proven hardy there. Many of the finest shrubs of Massachusetts are unfitted to the rigors of this climate. Any one intending to plant ornamentals should consult this bulletin before deciding what to plant.

LEGISLATION, Federal, State and Canadian. A Compilation of the Laws Regulating the Growth, Sale and Transportation of Nursery Stock. Together with the American and Canadian Tariff Regulations. By courtesy of Harlan P. Kelsey, Boston, Mass.

From T. S. Parks, superintendent Grove Hill Cemetery, Oil City, Pa., three snap shots of interesting memorials.

CATALOGUES.

Kelsey's Hardy American Plants and Carolina Mountain Flowers. Also some information about the root Ginseng, and Galax Leaves. Harlan P. Kelsey, Boston, Mass.

Description of the Rocky Mountain Evergreens, adapted to the East and West, and tested and approved, together with Shrubs and Flowers. Written by C. S. Harrison, York, Neb.

The Bridgeman Annual Catalogue of Seeds. Diamond Anniversary Edition. Alfred Bridgeman, New York.

PARK AND CEMETERY.

Devoted to Art Out-of-Doors,—Parks, Cemeteries, Town and Village Improvements.

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CONTENTS.

EDITORIAL—AMERICAN PARK AND OUT-DOOR ART ASSOCIATION—CEMETERY IMPROVEMENTS—SUGGESTIONS FOR THE NEXT A. A. C. S. CONVENTION—CEMETERY GARDENING.....	229, 230
MAGNOLIAS.....	230
*MOUNT GREENWOOD CEMETERY, CHICAGO.....	232
*THE DYER FOUNTAIN, ROGER WILLIAMS PARK, PROVIDENCE, R. I.....	234
*ROYAL BOTANIC GARDENS, KEW, ENGLAND X.....	235
*WATER LILIES—VICTORIA TRICKERI.....	237
*TRANSPLANTING ELMS, HUMBOLDT PARK, CHICAGO.....	238
*GARDEN PLANTS—THEIR GEOGRAPHY, XXXVIII	240
*A WOODLAND PATH.....	241
THE ARBOR VITÆ AMERICANA.....	242
PARK NOTES..	243
CEMETERY NOTES.....	244
CORRESPONDENCE.....	245
SELECTED NOTES AND EXTRACTS.....	246
PUBLISHER'S DEPARTMENT.....	247

*Illustrated.

THE receipt of the volume of proceedings of the American Park and Out-door Art Association, recalls its two annual conventions, and the sympathetic enthusiasm which accompanied its deliberations in Louisville and Minneapolis respectively. Its deliberations and discussions very naturally extended beyond the mere domain of landscape art, and touched many of the by-paths leading into that broad expanse of practical work. This was especially marked at the Minneapolis convention, where considerable attention was paid to the cultivation of the child mind in practical matters directly related to beauty of surroundings, and in which it was clearly demonstrated how important a part the school teacher plays in the education of the young in nature study. It also showed how fertile a field the public school is for disseminating knowledge of this kind and to what a delightful result it tends. Another striking feature very ably discussed in an important paper, on the working men's homes about the National Cash Register Co.'s Works at Dayton, O., was the value to the

community, and in fact to the country at large, of the successful effort to improve the homes and surroundings of the working part of the community. This is a work that calls for the earnest effort of all employing agencies. Few efforts have been made, unfortunately, to prove the value of the departure, but where they have been essayed, the returns have been wonderfully suggestive. Our attention has recently been drawn to the model village of Port Sunlight near Birkenhead, England, wherein the architect has been permitted to display taste and skill in the designs of the cottages and homes, where the surroundings are made attractive by plantings and lawns, where club rooms and every inducement to contented and happy life are provided, and where returns of one per cent. on the investment are considered an offset for the capital invested in view of the improved condition resulting. This is a business transaction on philanthropic lines which pays an immense moral dividend.

ONE very gratifying effect of the lawn plan of cemetery development is that it compels attention to details which would otherwise remain neglected. One can hardly imagine a beautifully planted plot of ground remaining very long degraded by unsightly entrance gates, or dilapidated boundaries. There is such a glaring inconsistency in such a condition, which exercises a very potent influence on the human mind. However careless nature may appear to be in some of her details, those details are more often clothed with an interest instructive or pleasing; there is a harmony somewhere in color or design, and arrangement frequently suggests lessons worthy of inculcation. The lesson of nature repeats itself in man when dealing with natural objects, so that a discordant note jars continually until a change is brought about. In this way shabby and dilapidated buildings and boundaries palls upon those intimately connected with cemetery management, and finally compels to a readjustment, to bring about harmonious relations throughout the grounds. It is gratifying to note quite a number of prospective improvements of this class under consideration. It is in line with the action to remove lot fences and curbing, which, while slow of complete eradication from our better cemeteries, nevertheless shows continuous progress, and will undoubtedly continue,

with the better appreciation of landscape art in our burial places.

AS the year opens again, and with it the gradual unfolding of plans and projects for future care, among them will soon be prominent preparations for convention week. At each recurring annual meeting of the American Association of Cemetery Superintendents, the absence of cemetery officials generally, other than superintendents, calls for comment; and it is strange that the important subjects discussed by the latter officials, and which are just as important in their degree to the whole management, do not draw their attendance as a matter of business interest. The matter of name of association has no real merit in the question, for so long as all cemetery officials are eligible to membership, the very fact that the questions discussed are inextricably interwoven into the business of the cemetery should be reason enough for their presence. However, having noted the difficulty so far, and surmising that the programmes are not sufficiently attractive, it would be well in arranging for the next convention, not only to devise a programme to include questions of more particular interest to the governing officials of the cemetery, but to secure the co-operation of such officials both in the reading of papers and their discussion. It seems certain that with a programme containing subjects pertaining to cemetery affairs, financial and managerial, and with discussions leading to the recording of what is being done and what has been done in a progressive way in other cemeteries, trustees and other officers would find it to their positive advantage to attend the annual convention. Progress is not progress in one department of the work and apathy in another: there must be sympathetic movement in all lines of work, and it behoves the Association to leave no stone unturned which may lead to the participation of all cemetery officials, of whatever department, in the annual conventions.

THREE is a great deal of comfort during this excessive cold period through which we have been passing, in the contemplation of the gardening work which our superintendents will be beginning to plan before many weeks are over in most of our cemeteries. There is considerable difference in practice in regard to this. With some the value of annual flowering and foliage plants for decorative purposes is uppermost, while with others perennial plants and dwarf shrubbery are the more attractive. There are conditions of course which more or less favor both views, and just so long as the average human being takes exceptional pleasure in a profusion of flowers, the flowering

plants must be provided. But they should be used with judgment and caution, and in appropriate situations. A gaudy display of flower beds in a cemetery does not accord or harmonize with its relations to humanity, while a careful and wise selection of flowers, appropriately placed, lends itself to the situation. Then, again, while the greenhouse has generally been a paying investment, its effects have been in some cases to litter the graves with heterogeneous assortment of plants, which it is impracticable to keep in that order in which in the interests of the lot they should be kept. It will be wise to continue to educate the lot owner along the lines which, while satisfying to the mourner, will tend to conserve the highest ideals of harmony and natural beauty.

MAGNOLIAS.

As winter draws toward a close all of us are thinking of our trees and shrubs, and enjoying in anticipation the many beautiful sights which will be afforded us by budding bush and blooming tree. Among the many beautiful shrubs of that season, we of Pennsylvania owe more to magnolias for what we enjoy than to any other class of plants. Some of them bloom before their leaves unfold; others, immediately afterwards, and still others, a month or so later on. Of those that bloom before the leaves expand, the best known are *stellata* (*Halleana*) *conspicua*, *Soulangeana*, *obovata* (*purpurea*) *gracilis* and *Lennei*. Others not so well known are, *Kobus*, *Watsoni*, and many hybrid forms, such as *Alexandrina*, *speciosa*, and *Norbertiana*. These hybrid forms vary a little from *Soulangeana*, from which the presumption is they have been raised, but hardly enough to be worth keeping separate.

The first of these to flower is *stellata*. This is a Japanese one, of dwarf habit, bearing semi-double, fragrant flowers, which are light pink in the bud and white when expanded. In sheltered spots this is apt to flower too early in spring, rendering it liable to be caught by late frosts. Because of this inclination it is better planted in a more exposed or less sheltered place, that its flowers may not be jeopardized. And as the flowers are white, see that the background is not a white wall or stone, or the flowers will hardly be perceived. A dark leaved evergreen near it sets off the flowers to great advantage; and this is true of many other flowering shrubs.

Probably the Chinese white one, *conspicua*, is the next to open its flowers, though *Soulangeana*, known as the pink one, is no more than a day or two behind it. These two are the best known of all. As has been said of *stellata*, so of these, the

best place for them is the most backward one on the place, that the flowers may not unfold until the late frosts are over. Time and again I have seen these kinds lose their flowers by being frozen off after being expanded. The old *purpurea*, *obovata*, as it is now properly called, as well as *Lennei* and *gracilis*, open a little later, and usually escape the freezing referred to. *Purpurea* is a true bush, bearing purplish flowers. *Lennei* is also purplish red, and has cup-shaped flowers, of large size, and is altogether a desirable sort.

In the vicinity of our older cities there are magnificent specimens of many of these magnolias. Many of them, though still of shrub-like outline, are 20 feet high, and the grand sight they are when in flower can be imagined. When grown to single stems, as so many of them are, they take on a tree-like character.

The magnolias which bloom after the leaves expand are chiefly those of tree-like growth, such as *tripetala*, *macrophylla*, *acuminata*, *Fraseri* and *hypoleuca*. All have whitish or yellowish white flowers, and all have pink seed pods when fruit is ripe. *Tripetala* and *hypoleuca* are the best of all for brilliant pods. Neither is of so very large a growth of tree. Both have white flowers soon after the flowers unfold, and these flowers are followed by pods, which open in August, and are then of a beautiful pink color. The trees are prettier then than at any other time. *Macrophylla* has immense leaves, and roundish, light pink pods. *Acuminata* is noted for its symmetrical growth, and its pods, though small, are well colored. *Fraseri* is one of the most desirable of all, because its canary-yellow flowers are of delicious fragrance. These flowers are a little in advance of the leaves, but do not expand as soon as the shrub kinds spoken of. It becomes a very large tree in time.

There are two later blooming sorts that may be mentioned, viz.: *glauca* and *grandiflora*. *Glauca* commences to bloom in about a month after the others, in May, and flowers follow one another for several weeks. This is the one with the small fragrant white flowers, common in damp ground in many states, especially South of this. It is almost evergreen, and probably wholly so further South.

Grandiflora is the evergreen one of the South, justly famed for its noble foliage and flowers. Just how far it will live out north, I do not know. It thrives about Philadelphia, and I have seen it at Long Island, New York. This species does not flower when small, as most of the others do, but its handsome evergreen leaves are an attraction at all times. The flowers are white, with a slight tinge of crimson at the base of the stamens, and are of great size, six inches and over, in diameter when

expanded. To have this do well, do not forget to plant it where the afternoon sun wont reach it in winter. It prefers no sun at all, but an hour or two in the morning wont hurt it. The sun kills the leaves.

Plant magnolias in the spring, never in the fall, in the Northern states. The fall planting of fleshy rooted trees and shrubs, such as magnolias, tulip, poplar, etc., invariably leads to loss.

Joseph Meehan.

Among the interesting matter of the annual reports of the Park Department, City of Cambridge, Mass., are the paragraphs relating to shade trees and the improvement of school grounds, which promises to be a most important feature of departmental work in the future. On the subject of shade trees Mr. H. E. Whitney, superintendent says: "It is the intention to employ a 'tree inspector' next year, whose duty it shall be to carefully inspect all the public trees in the city, making a report as to the condition of the trees and wire guards, what trimming is needed, where trees are too crowded, or where trees should be planted. In this way it is hoped that any work done on the trees may be systematic, tending to the best results for the whole city rather than for individual cases." Speaking of the Brown-tailed moth, which had got a strong hold in North Cambridge and Old Cambridge, to which attention was called by the State Board of Agriculture: "Thirty men who had been employed by the Gypsy Moth Commission were secured and set to work in the most badly infected districts. This work was continued for about five days, during which time 811 street trees were climbed, on which 3,386 nests were destroyed, at a total cost of \$397.94."

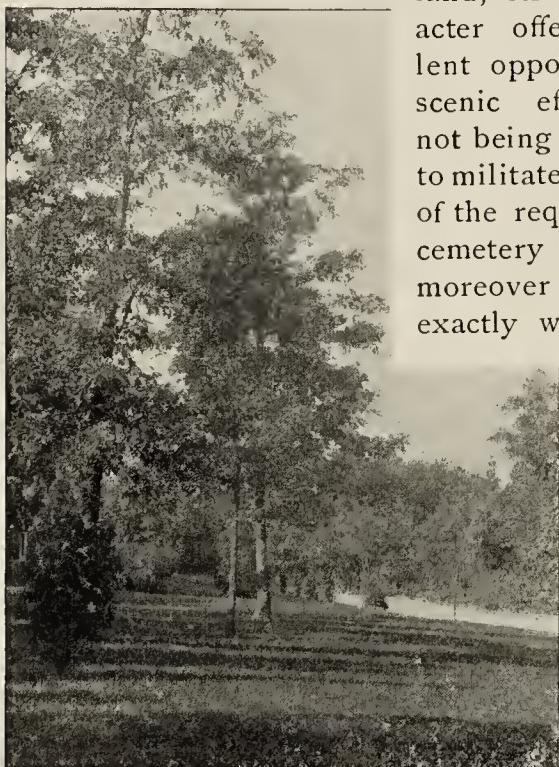
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The American consul at Guadalupe has transmitted a report to the state department on a peculiar plant growing wild there. He says that if any leaf be broken from it and pinned to the wall in a warm room each of the angles in the undulations of the leaf begin to throw out a number of white thread-like roots. Next a tiny plant begins to sprout and this in two or three weeks attains a height of two or more inches. When the leaf begins to shrivel, which may take from six weeks to three months, the young plants may be cut out with scissors and put in the ground, where they rapidly grow. When cultivated, they attain a growth of four feet and produce graceful red and yellow flowers. The consul believes it will make a desirable hothouse or garden flower. His report, with specimens of the leaves, has been submitted to the agricultural department.

MOUNT GREENWOOD CEMETERY, CHICAGO.

Touching the southwest limits of the city of Chicago, and immediately west of Morgan Park, easy of access by road, railroad and electric cars, lies the cemetery of Mount Greenwood, a lovely tract of undulating land. It has an area of some eighty acres, and forms a part of the northern extremity of the celebrated Blue Island Ridge, that prolific field for the student in matters pertaining to the glacial period of the earth's existence, which is at this point 70 feet above Lake Michigan. In its conformation it is a remarkably attractive piece of

land, its rolling character offering excellent opportunities for scenic effects, while not being so abrupt as to militate against any of the requirements of cemetery service, and moreover the soil is exactly well suited to the purposes of burial, being light and porous and consequently free from water. It was originally densely wooded, the majority of the

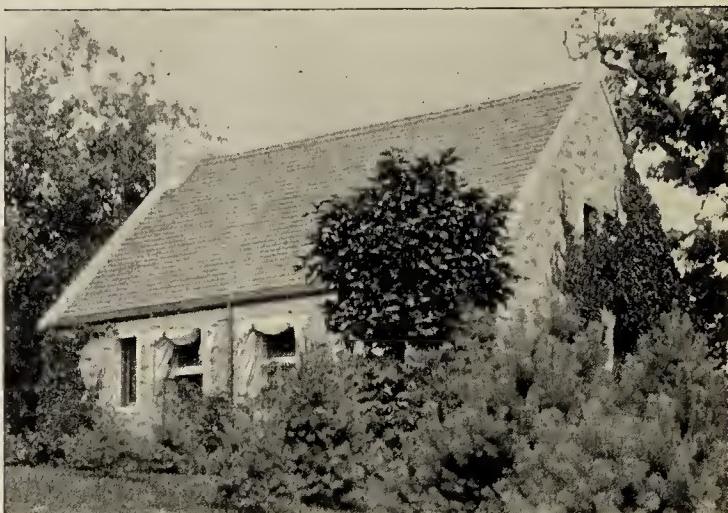


VIEW IN MT. GREENWOOD CEMETERY, CHICAGO.

trees being white and burr oaks, and in the clearing up, care has been taken to preserve the finest specimens of trees and the natural planting as far as was consistent with the proper development of the number of sections required for use.

Mount Greenwood cemetery was incorporated July 5, 1879, and the first interment was made in 1880. Until October 1886 the improvements of the grounds were carried out under the direction of Mr. C. W. Dean, superintendent, and from that date the cemetery has been in the care of Mr. Willis N. Rudd, secretary and superintendent, now the president of the National Association of American Florists, to which office he was elected at the last annual meeting of that body.

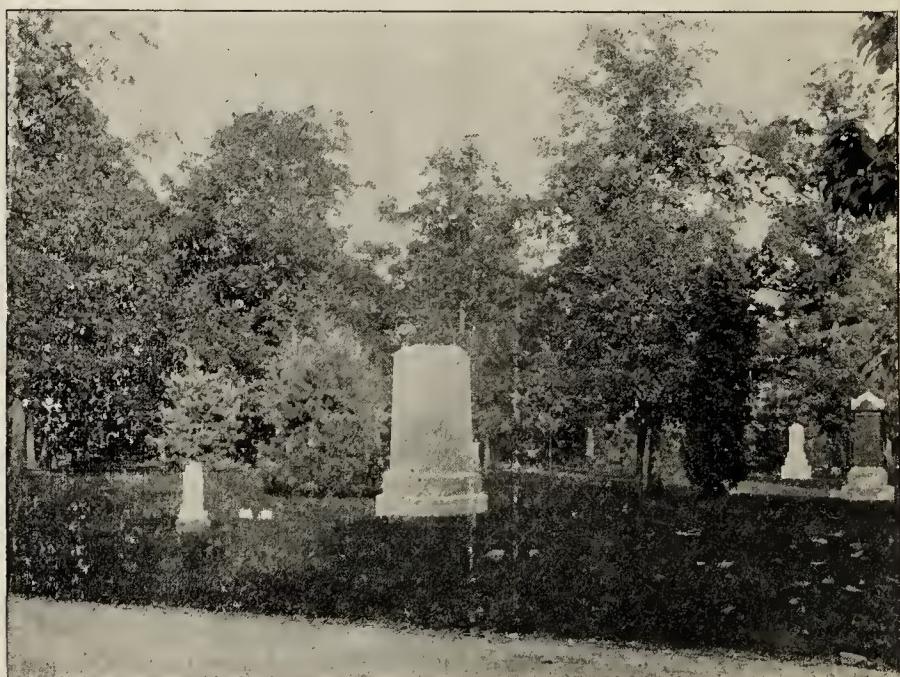
The permanent structures of the cemetery are: An office building and Re-



REAR VIEW OF OFFICE.

ceiving Vault, constructed of limestone and of appropriate and pleasing design. A large greenhouse plant and nurseries afford ample resources for the floral requirements of the lot owners and for the planting purposes of the cemetery, in fact the majority of the premiums offered at the annual Chrysanthemum show of Chicago have been secured by the Mount Greenwood greenhouses.

From what has been said and by the aid of the accompanying illustrations, it will be observed that there is much that is charming about these grounds. They undoubtedly excel in natural beauty, which has been considerably emphasized by the efficient care bestowed in the development. There is a striking sense of restfulness and peace over it all. The quiet of the valleys, the expanse of landscape from the crowns of the undulations, the pictures in the groupings of bush and tree. One seems far away from man in a quiet ramble over the fine roads, yet looking to the north the smoke cloud of



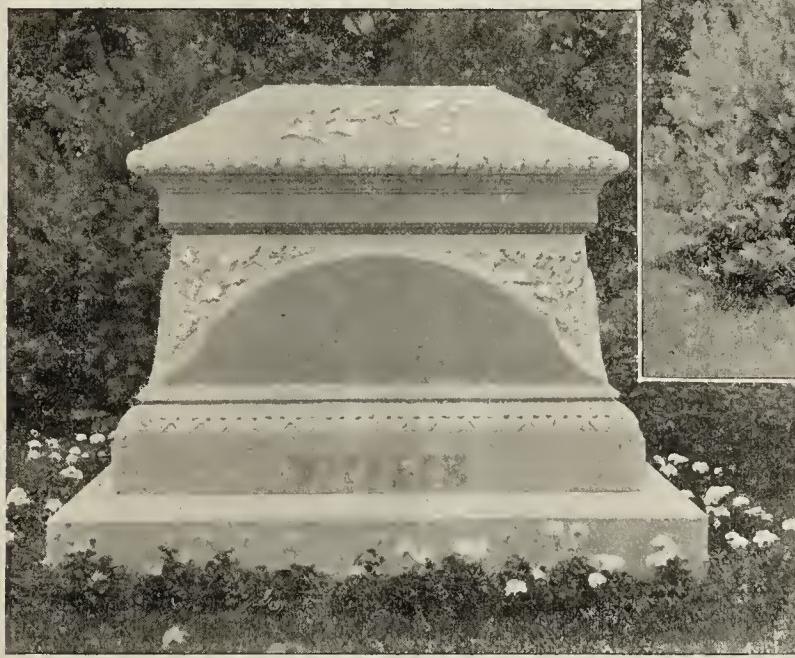
VIEW IN MT. GREENWOOD CEMETERY, CHICAGO.

the great city hangs like a pall over her thousands of people.

One point to be especially commended in the management of Mount Greenwood is the care bestowed on the single grave section, and we learn that it is the aim of the association to make this not the least attractive feature of the cemetery.

In regard to improvements progressive ideas govern the management. Up to the present there is no waterscape to lend its fascination to the grounds, but a lake is mapped out, which when completed will be on lines not commonly seen.

There are a number of fairly good monuments in the grounds, but as in most of our cemeteries, modern restrictions were not in operation early enough to prevent the introduction of more of an inferior grade than are desirable under the lawn plan. However, the following from the rules and regulations, now place the control of this feature of cemetery work in the hands of the superintendent:



FRONT OF WITBECK LOT, MT. GREENWOOD CEMETERY, CHICAGO.

"Only one monument, which must be of proper design, material and workmanship, shall be erected upon a lot, and all monuments shall be placed in centers of the lots. Monuments shall not be erected at single graves, nor upon fractional lots of a less area than 120 square feet.

"Vault or monumental work, which by reason of faulty design, poor material or bad workmanship, will be lacking in durability or soon become unsightly, shall not be erected. If such defects become apparent during the erection, the work shall be stopped and the defects corrected. If the defects cannot be corrected or the lot owner does not correct them within a reasonable time, the whole structure shall be removed at the lot owner's expense.

Granite and white marble are the only materials admitted to the grounds for monumental purposes, and all monuments, markers and vaults must be set upon foundations built of solid masonry or concrete, of sufficient size and depth to properly sustain the superstructure, and these foundations are built by the association.

"Vertical joints in monumental work will not be allowed.

"Vaults, built partially or entirely above ground, must be of granite. When walls are eighteen inches thick, or less, the ashlar and other stones must be the full thickness. In heavier walls every second course may be in two beds. In side hill vaults,



REAR VIEW OF WITBECK LOT.

the rear or catacomb portion may be of brickwork. When the roof is flat, it must be in one piece; when pedimental, in two stones, one on either side. The ridge coping and backstone must be each in one piece, also the front cornice where practicable. Roof stones and coping must be let three inches into cornice and backstone, to avoid upright joints. The catacombs must be built air tight. All metal work must be of standard bronze."

With regard to markers, only one stone is allowed at each grave, and that of prescribed dimensions.

The superintendent exercises control in all matters pertaining to the improvement of the cemetery. The landscape plan is adhered to, and no destruction of shrubs or trees is permitted after the section is made ready for interments. The planting of the section is made to form a part of the adjacent landscape, which would be marred were the planting to be afterwards made subservient to the lot owners' wishes.

THE DYER FOUNTAIN, ROGER WILLIAMS PARK,
PROVIDENCE, R. I.

There are many points in a public fountain that render it admirably available for memorial purposes, which will be at once apparent to the reader. It may be said that such features of city embellishment, where such have been erected, and they are common of course in European cities, always form attractions, not only to the inhabitant whose pleasure it always is, but to the visitor, in greater degree.

On these grounds there are doubtless many admirers of the Dyer Memorial Fountain of Providence, R. I., of which an illustration is given herewith.

The donor was the late Daniel Wanton Lyman of North Providence, who left several public bequests in his will, among them one for Brown University which has since been expended in the erection of the handsome Lyman Gymnasium there. Mr. Lyman was a grandson of Elisha Dyer, a merchant of Providence, father of the late Gov. Elisha Dyer and grandfather of the present Elisha Dyer. He left a bequest of \$10,000 to provide a memorial to his grandfather, the first

Elisha Dyer, at Roger Williams Park, not specifying its character, which was to be determined by the authorities. The Park Commissioners decided to erect a memorial fountain in one of the chain of lakes in the park and opened a competition for designs. There had been talk of building a memorial arch, but the bequest proved to be somewhat short of the amount originally intended by the donor and it was thought best to erect a fountain. About \$9,000 was eventually found available for the purpose.

Mr. Henry Hudson Kitson of Boston, the de-

signer of the fountain presented at first a figure in competition which was considerably altered to meet the ideas of the authorities. As originally designed there was no eagle, as in the present statue. The figure, as it stands, is modelled exactly from the figure of a young man in Boston. It represents "The Athlete," who is supposed to have caught an eagle by the feet, as shown in the accompanying picture. The pose is full of life and the fountain makes an attractive feature of the lake in which it is placed. The figure is of bronze and the basin is of Westerly granite. The height of the figure is seven feet, eight inches, and the eagle stretching higher in the air gives the whole composition a natural and realistic aspect. The casting was completed and the fountain erected late in the year 1893.

Roger Williams Park, in which the fountain stands, is one the largest and finest in New England, and the principal one in Providence. It comprises 428 1/4 acres, of which 130 are water. There is a handsome monument to the memory of Roger Williams within its limits, and various statues, including one representing "The Gladiator." The park covers a diversified area and one of its chief attractions is the chain of lakes in one of which "The Athlete" stands. There are several handsome municipal buildings within the park, including a new casino, boathouse and museum of natural history.

It was at first intended to have the water in the Dyer Memorial Fountain spout from the eagle's mouth, but this involved too great expense, and it was decided to lead it through the mouths of the gargoyles at the bases. The general opinion appears to be that the figure is striking and execution good.



THE DYER FOUNTAIN, ROGER WILLIAMS PARK, PROVIDENCE, R. I.

ROYAL BOTANIC GARDENS, KEW, SURREY,

ENGLAND. X.

FILMY FERNS.

Among ferns, the filmies have special interest. Tall Dicksonias, Alsophilas and Cyatheas are not uncommon but it would be interesting to know if any Filmies are cultivated in the United States. Through the munificence of a London surgeon, Kew largely owes the extent of its collection. Dr. John Cooper Foster was said to have been the most successful cultivator of these plants in England. He made a special study of their requirements and grew them both on the roof and in the rooms of his London dwelling. "Filmies" is an appellation confined to three genera. *Hymenophyllum*, *Trichomanes* and *Todea* — the principal distinguishing character, botanically, of the two former is that *Hymenophyllum* has a two valved involucrum and in *Trichomanes* it is united into a cup. Principal among the requirements necessary to perfect cultivation are: (1) a humid atmosphere charged to saturation point, (2) no direct sunlight, (3) no draught nor drought.

Fronds so delicate and thin as to be translucent cannot endure a dry air—they grow naturally near brooks; in caverns or even in a place of occasional drip. They grow well when the condensation settles and remains in a profusion of dew drops on the foliage, and yet they dislike spraying, except perhaps in Ireland. Subterranean caverns and cases within the greenhouse are two methods that insure humidity and equable temperature, the first a resort of Messrs. Backhouse at York, the second that usually adopted and the one in vogue at Kew. This class of plants are intolerant of direct sunlight. They must have light and do not want continual shade, nevertheless demand reflected or refracted light. The difficulty increases with the rising of the out-door temperature toward summer. The drier the atmosphere the cooler can the temperature be maintained but draughts increase proportionally. It is to be remembered that the majority of these ferns are "cool" growing and some will even withstand several degrees of frost.

An atmosphere continually at saturation point is governed by glass cases inside the houses. If water is liberally sprinkled on the exposed surfaces within the case without wetting the foliage little difficulty is experienced in that direction. By vigilantly keeping the temperature low and the atmosphere humid in the house, the

possibility of creating the ideal environment for the plants in the cases is markedly increased. Avoiding direct sunlight, however little or weak, is of paramount importance at all times. Naturally the question is: How can one keep a low temperature that is also humid and without draughts during the hot summers? That's the difficulty in growing filmies. Dr. Foster never gave his plants ventilation beyond that obtained while they were receiving maintenance attention. He maintained a cool atmosphere by having a stream of water continually playing on the outside of the house, thereby cooling the iron and woodwork and consequently the air; in South Africa the houses are opened in the early morning, the cool air admitted and the houses then closed for the remainder of the day; at Kew the grooves in the walk formed by the beveled edge brick are kept filled with water and the walls, ceilings, under the stage and all exposed surfaces liberally and frequently syringed, a very effective method for holding down the temperature and at the same time insuring a high per cent. of saturation. In balmy Ireland the difficulty is too slight to require any special treatment.

Drainage must be perfect, the soil contain little or no humus and if the peat has fine fibre with part of the peat oil shaken out it is better than either coarse orchid peat or the peat without fibre. Depth in drainage is immaterial, the object is to have that provided perfect. Supposing it is to be brick bats and potsherds, the top is covered with a three inch layer of peat sod intermixed with large pieces of charcoal. On this, small bits and large and well formed pieces of white sandstone, the whiter the better, since the deeper red the greater proportion of iron they contain and our purpose is to shun iron in this connection. A mere sprinkling of peat over the rocks will suffice in the way of organic plant food for any sustenance the plant may need. If the plants are purchased in pots they may be turned out, the drainage removed and then placed on the rocks, filling in around the sides with peat and finely broken sandstone to give it compactness. When water is necessary it is applied to the stone and capillary attraction brings it to the roots of the plant. Should the depth of the soil in which the plant has been growing be too great, transplanting imperfect or in any other manner should the water fail to reach the roots in the soil it must be applied directly by saturation.

Under *Hymenophyllum* and *Trichomanes* about 25 genera are constituted and *Hymenophyllum* alone ap-



TRICHOMANES RADICANS, IN FILMY HOUSE, KEW.

proximates 75 species. They are natives of the tropics and south and north temperate zones of both hemispheres.

Two, though rare are found in the United States; Jamaica possesses some of the choicest and perhaps the largest representation of species of any country of equal area.

Todeas are the coarsest of all, and superba the species which luxuriates in the open air in Cornwall and the south of Ireland is the best known and most deserving of general cultivation. T. Fraseri and its variety Wilkesi are naturally prettier than superba but their difficult management is the cause of their being ill favored in cultivation and always having a bad appearance.

T. Moorei (grandipinula) of Lord Howes Island grows equally poor although a species presumably pretty in its native home. T. hymenophylloides (pellucida) is still more or less of a probationer in cultivation. Specimens of Todea superba three to four feet in diameter are among the Kew collection.

Tropical species among Trichomanes; T. Kaulfussi; T. Prienii; T. spicatum and T. pinnatum are the most easily cultivated and tractable species.

Hymenophyllum polyanthes which inhabits the tropics everywhere is a very free grower.

Trichomanes radicans, the Killarney Fern, is rather cosmopolitan and inhabits principally temperate and sub-tropical regions. In the United States it is found in Kentucky and southwards. Its varieties are many.

Trichomanes reniforme—the "New Zealand kidney fern" has a distinct aspect. The large, broad, kidney-shaped fronds usually held erect on the short stipes are decidedly in contrast to all other filmies. It is one of the easiest to manage.

Difficult to cultivate are Trichomanes Colensoi of New Zealand and especially membranaceum which is also very slow growing. Both do best on stone.

Prettiest of all the easier growers is Hymenophyllum demissum, an inhabitant of various Polynesian Islands. The beauty of the dense but thin and narrow segments of its divided fronds growing as they do, compact, low and even, it is truly charming. This more than any other carries a dense array of glistening dew on the light green fronds. With age the fronds turn a dark glossy green and grow from three to twelve inches long and two and one half to four inches wide.

Among those difficult to grow are Hymenophyllum rarum; H. aeruginosum from the Isle of Tristan; Trichomanes rigidum and its varieties: Hymenophyllum hirsutum and H. sericeum, both with hirsute foliage that demand absolute freedom from water on the fronds. H. dichotomum groups itself here.

Hymenophyllum venosum thrives well on either fern stems or planted on a rock. H. multifidum grows very well.

Trichomanes auriculatum does fairly well if grown on stone.

Hymenophyllum cruentum from Chili is remarkable in having red tinted foliage in autumn, when growing where it is indigenous.

For length of fronds, the variety prolongum of Tric-

homans Luschnathianum, itself probably a variety of radicans, most likely takes the lead with its sessile fronds from eighteen inches to two feet long.

A set very difficult to establish is that to which Trichomanes cuspidatum of Mauritius belongs and in fact all those from Mauritius are hard, Trichomanes Barclayana; Trichomanes Bojeri, etc.

Inhabiting the tropics but cool growing under cultivation, that choice little Trichomanes pyxidiferum is interesting.

Among the smaller species that bend well under artificial treatment and deport themselves creditably, Trichomanes parvulum, we believe first introduced by Veitch of Chelsea, is noteworthy.

Species such as alatum, pyxidiferum and that set thrive on either fern stems with attached sphagnum moss or in pans mounded with sphagnum. The famous Hymen. Tunbridgense, once so common around Tunbridge Wells and still found in Eastern and Southern Europe does well under this treatment. Trichomanes Petersii another dwarf gem is an American but it has not been recently found in its natural home. It has been found in Winston County, Alabama.

Though not a Filmy, Asplenium resectum calls attention here as requiring filmy fern conditions for successful cultivation.

Plants offered for sale by the European nurserymen are usually imported. They can be propagated by dividing the rootstalks after establishing themselves on new pieces of fern stems. So rarely is growth from spores successful that it is beyond hope of a novice to start thus, the most experienced fern growers fail repeatedly in it and usually rely on imported plants.

Todeas and some of the coarser Trichomanes do grow from spores under cultivation but the choicer sorts and all the Hymenophyllums do not.

Insects and filmies are not divorced. In the cool and hot cases the green Aphis occasionally appear. Should the plants be growing in pans or on tree trunks that are easily movable, immersing the entire foliage in soft rain water for a day will free them. If planted out they may be fumigated lightly with tobacco allowing as little heat to enter with the smoke as possible. Syringing with diluted tobacco water and in the course of two or three hours rinsing them with clean water is also effective. Best of all, when possible, keep up a tobacco tainted atmosphere by strewing tobacco stems about the cases. More difficult to eradicate is the principal and practically the only other insect preying on them, the black thrip. Various forms of tobacco are effectual but probably the best method is to remove them with a soft sponge dipped in soap water.

If red spider occurs, sponging with cool, clear rain water or syringing is necessary but when this or thrip appears in quantity the cultivator has been negligent, inefficient, or the climate is too hot, changeable or otherwise severe to permit their cultivation.

At Kew the filmies are grown in a span-roofed house 50 ft. long, 14 ft. wide, 9 ft. high to ridge and 5 ft. 9 in. to gutters. A central walk divides it into two. From the stage level 2 ft. 9 in. above the ground, the face of the

cases are 4 ft. high and on the back 2 ft. 6 in. with the brick of the house wall itself serving as one side of the case. Sliding glass sashes are in the front and light T iron supports the single movable glass panes that connect with the back wall and form the top of the case. An air chamber of about one foot exists between the top of the case and the house roof. Three, four feet wide stages support the drainage of rubble surface with peat, charcoal and sandstone to a height of two feet on the back, sloping down to three inches on front.

Three, four inch hot water pipes ranged horizontally extending the length of the house along side the back wall and starting from the ground at one end gently rising as it recedes to the other. These are placed on either side, but only one side is operated and that only on very severe nights in winter to keep out the frost. No top ventilation, is given but on either end at the apex a single ventilator of 54 sq. ft. opening from above is provided, also under the stages on the New Zealand side four 12 in. by 22 in. ventilators are constantly kept open.

One inch slate, varying from 20 in. to 2 ft. 9 in. in width and 4 ft. long, form the bottom of the stage allowing for drainage one quarter in. between each two.

Filices have always received much attention at Kew.

John Smith I, the first curator scientifically bent in contrast to John Smith II, showed his ability in and love of ferns, starting with fifteen plants fifteen years before the institution became public he gradually enriched it in size and species until in 1856 upwards of 500 species were in the collection. In 1866 Smith published a classified list of all the ferns in cultivation under the title of "Ferns, British and Foreign," a pains-taking work of great value and unusual historic merit and further interesting as probably being the first published list of any group of plants growing at Kew since the second edition of Airton's "Hortus Kewensis." His personal views on classifying ferns is given in his "Historia Filicum" published in 1875.

Upon ferns is one of the first among the prolific series of works issued from Kew during Sir William Hooker's time. About 1843 the Director published "Genera Filicum" illustrated by the drawings of Francis Bauer made during a number of years previous.

In 1846 Sir William Hooker started the publication of "Species Filicum" an exhaustive work in five volumes and only completed a year before his death. "Synopsis Filicum" a sort of abridgement of the foregoing brought out by Mr. Baker in 1868 (ed. II 1874) was planned and

actually started by Sir William before his death in 1865. That virtually embraces our best systematic botanical study of the ferns in the universal flora. There appeared subsequent to this in Hooker's "Icones Plantarum" the fern novelties down to 1887.

Mr. Baker again in the "Annals of Botany" (1891) reviews all those brought out since 1877. To-day over 1,000 species of ferns are cultivated at Kew, of these 50 are filmies. Except for their comprehensive representation they are most noteworthy for their extraordinary successful cultivation.

Emil Mische.

WATER LILIES—VICTORIA TRICKERI.

I read with much interest the cultural notes on aquatics, especially the Victorias by Mr. W. Tricker in the December number of PARK AND CEMETERY and having made the first attempt last season to grow a Victoria in our pond in Bushnell Park, Hartford, Conn., I offer a few lines to describe my experience in that direction. Last January I procured some seeds of Victoria Randi and Trickeri, and following the directions of Tricker's Water Garden, is the Work of the Bullfrogs.

I succeeded in germinating every seed of the Randi, but only one of the Trickeri, and that one so late and poor that it was useless to plant it out. The reason for the failure to germinate Trickeri was undoubtedly too high temperature of the water, which was when lowest 65 degrees.

The Randi's grew right along at a temperature of about 80 degrees, but when planted out in June, the plants stopped growing at once, and disappeared entirely within a few days.

Feeling satisfied that it was useless to make another attempt to grow the Randi without artificial heat to start it along in its permanent quarters, I concluded to try the Trickeri, and I procured a young plant. The plant arrived first week in June in good condition, with 2 leaves from 8 to 10 in. diameter and one leaf about ready to unfold. I first put the plant in a tank at the green houses, with the water at a temperature of about 75 degrees. Finding the water in the pond to be from 75 degrees to 80 degrees, I brought the plant to its final quarters about 3 days after its arrival. I had previously built a large box 12 ft. square and 2 ft.



VICTORIA TRICKERI in Bushnell Park, Hartford, Conn. Grown Without Artificial Heat. Summer 1898. The Defacement of the Rims is the Work of the Bullfrogs.

deep, in the centre of the pond, which box I filled $\frac{2}{3}$ with turf soil and $\frac{1}{3}$ well rotted cow manure, all well mixed. On the top of that filling I placed a 2 in. layer of sand to prevent manure from floating. The top of that box is 2 ft. below the regular water line, but at the time of planting I had only 1 foot of water above the box, and afterwards the water level was raised only 2 in. every other day in order to not reduce the temperature of the water too much. The plant was not planted more than 4 days before it showed its first new leaf, and after that it kept right on producing 2 to 3 leaves every week.

Early in July the first blossom appeared, and up to nearly the end of September it produced a flower about every 5 or 6 days. The illustration herewith shows the appearance of the plant in August. Farther back you see *Nymphaea Devonensis*, which was grown from a tuber started at the green houses in February. The immense flowers of this *Nymphaea*, in their most brilliant rosy red color, were a great attraction, and *Devoniensis* was the queen of our collection of 7 or 8 varieties.

The Victoria would have shown up better yet, in way of perfect rims of leaves (as seen on accompanying illustration of Mr. Trickers notes in December number), if it had not been for the savage attacks the plant had to withstand from the numerous mammoth bull frogs which inhabit our pond. They too are a great attraction for many observers of our aquatic garden, and being old residents they at once assumed through sounds and acts their privilege to use the Victoria leaves for their airing and sunning stations. An attempt will be made the coming season to break that habit by furnishing them more substantial platforms with some large stones emerging a few inches out of the water.

Victoria Trickeri is a great and invaluable addition to the water gardens of our eastern states, and the success which crowned the first attempt to grow it here in our pond, urges me to invite every grower of aquatics, amateur to professional, to give the plant a trial. If successful the results will more than repay the outlay of pains and labor.

Theodore Wirth, Supt.

Wordsworth's cottage at Grasmere, England, together with portraits, manuscripts and about 2,000 letters, have been presented to the British nation through the efforts of Prof. Knight of St. Andrew's. It is lamentable that no one has come forward to perform a like kindly service for Tom Moore's cottage on Muswell Hill, London, which is not unlikely to be torn down. It was there that "Lalla Rookh" was written. Afterward Moore lived at Bowood in Wiltshire.

TRANSPLANTING TREES DURING MID-WINTER.

Large trees are often desired to give age and grandeur to new plantings, or to accomplish immediate results and to give the proper finish in conformity with the architectural outlines of buildings.

In changing the course of a drive, erection of buildings, or where the planting has become too thick, love and close attachment to large trees, the building up of which has taken half a century, sometimes, prevent the destructive axe from doing its deadly work when a removal is necessary to accomplish the desired improvements.

In such instances we take to mid-winter planting, first for its cheapness, and second because the short and otherwise too busy spring could not give the necessary time for planting a large number of big trees.

About the trees that it is proposed to move, there should be placed in the fall a good cover of straw manure, and where the holes are to be dug for their reception, a good covering of the same material should be placed. Otherwise the cost of digging the solidly frozen ground will be greatly increased.

Removing trees in cold weather demands the ball of earth surrounding the roots to be frozen solid enough to enable handling without breaking. The size of the ball will have to be in accordance with the size of the tree. As a rule a ball of 7 feet diameter and as deep as the roots have taken hold of the soil, usually $3\frac{1}{2}$ to $4\frac{1}{2}$ feet, would be sufficient for most trees not over 12 inches in diameter. The elm shown in illustration had a ball of earth 8 feet in diameter and the trunk measured 4 feet in circumference; its whole weight was 12 tons. Care must be taken not to break any limbs, and to avoid this a couple of strong wooden horses, the height of which will vary according to the size of the tree, are used to permit the trunk to rest on when letting it down after it has been lifted out of the hole. This latter work is done by pulling the tree over to one side, throwing the excavated soil under it; then pulling it the opposite way, again filling in, and so on until it finally rests on the top of the ground.

After the tree has been brought down on the horses, such branches as may drag on the ground are securely tied up, and such trimming as is found necessary, if any, is now attended to. The wagon is pulled up alongside the tree and the trunk securely fastened to the rear wheels; otherwise the top would throw itself back when the ball or root part is pulled on the wagon. This latter is done by tying a strong rope to the trunk of the tree, close to the ball, and after a deep scar has been cut into the top edge of the frozen ball for the rope to get a good hold in, it is wound several times around



TRANSPLANTING ELMS IN HUMBOLDT PARK, CHICAGO.

the ball. A good team hitched onto the rope will pull with the help of double pulleys any tree that a wagon will carry. The rolling off from the wagon into the hole is done in the same manner, only in place of tying the trunk of the tree to the wagon it is fastened to a crowbar that at the proper distance from the wagon has been driven into the frozen ground in a slanting position to prevent the rope from slipping. The tree, after it has been rolled into the hole, is now easily raised by a good team of horses. In reference to the hole, I may add that it should at least be large enough to allow room for from 1 to 2 feet of good black soil around the tree, and on sandy or stony land, considerably more.

Plenty of canvas or other material to protect any part of the tree from being injured, either from ropes or from pulling it on or off the wagon, should always be on hand; also short pieces of plank for blocking up the carriers of the wagon to avoid breaking when the tree is pulled on, and also between the ball and the wagon, to permit an easy rolling. A piece of old rubber hose nailed onto the top of the horses is deemed necessary to protect the trunk from barking off.

Trees transplanted after this method never fail to grow if properly attended with watering during the first three years, and, if extreme dry weather sets in, even for a longer period. Not enough stress can be laid on this point, which, to my experience, is the only fault found. To illustrate, I shall compare a tree transplanted in this way to a plant cultivated in a flower pot. In both instances, if permitted to get dry, the ball will contract to such an extent as to leave an open space all around the ball, thus permitting the hot air to penetrate the soil to the full depth of the ball, and as it is here that new

root action is encouraged, it is readily understood how disastrous neglect of watering will be; besides, it becomes very difficult to saturate the once dry ball, the more porous soil surrounding it absorbing all the moisture. In severe freezing weather the roots of a tree that has been dug are liable to be injured and should be protected by a covering of straw litter or by a sprinkling of water all over the sides of the ball, thus covering it with a solid coating of ice. Should thaw weather set in a good covering of straw or leaves will preserve the frozen ball for weeks.

There is undoubtedly room for argument both against and for transplanting large trees, but it must be admitted that, if properly taken care of, success is sure to come. Nevertheless, ruins of once stately trees, the result of such attempts, are to be seen everywhere.

The trees referred to in these notes are elms, the only kind that can be successfully moved at a mature age. I have transplanted almost every genus that is grown in these parts, but none with such satisfaction as the elm.

Jas. Jensen.

Prof. S. A. Knapp, has returned from the Orient where he went for Secretary Wilson of the department of agriculture on a mission to gather seeds of staple agricultural products for sowing in the southern states, and to promote the export trade of the United States in certain lines of industry. He returns well satisfied with the result of his labors. He found in Japan rice seed much superior to that used in the south, and also several new foreign plants and fruit trees. He has also arranged to ship samples of American products to various eastern countries. He also visited the Philippines.

GARDEN PLANTS—THEIR GEOGRAPHY—XXXVIII.

ERICALES.

THE VACCINEUM, ERICA AND EPACRIS ALLIANCE.

(Continued.)

Pyrola, "wintergreen," is a genus of low evergreen herbs with roundish leaves and spikes of greenish white or purplish white flowers. There are 16 species in North America, Northern and Central Asia, and Europe. American botanies describe 15 species and varieties distributed from Labrador to Mexico, the majority spreading across the continent and sometimes to Asia.

Chimaphila, "spotted wintergreen," has 4 species, two of which appear to be exclusively American, and another, the "pipsissewa," extending to Asia and Europe. They have thick, shining, scattered leaves, and white or purplish, waxy, fragrant flowers. They are principally found in the dry woods.

Clethra has 26 species, 2 in North America, and the rest in South America, the Madeiras, the Malayan Islands, and Japan. *C. Alnifolia* in variety is known as the "pepperbush," and is a good garden shrub with fine foliage and terminal racemes of fragrant white flowers. *C. accuminata* of the Alleghanies sometimes becomes a small tree, and the racemes of flowers are solitary and nodding. *C. arborea* from Madeira is a beautiful evergreen

with racemes of flowers reminding one of sprays of lily of the valley. It has dwarf and also variegated varieties.

The Monotropae are a curious tribe of root parasites growing under coniferous and other trees, or sometimes they are parasitic on the roots of herbs.

Allotropa virgata is a reddish or whitish, scaly, fleshy herb, with a simple stem terminated by a



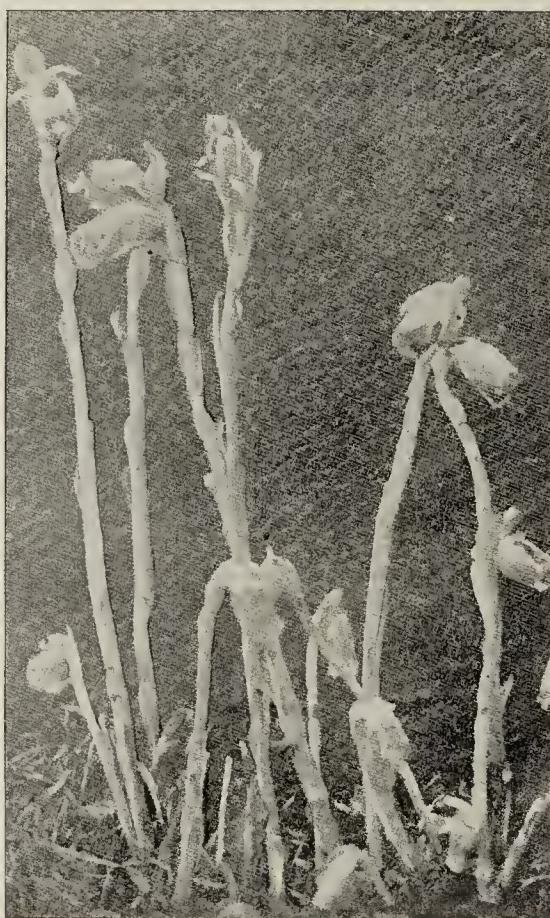
CLETHRA ALNIFOLIA.

many-flowered spike of flowers. It is found in oak woods in Washington southward to California.

Sarcodes sanguinea, the "snow plant," is a stout, fleshy herb growing to 6 inches or a foot high, covered with reddish scales, terminated by a thick

spike of flowers accompanied by linear bracts longer than the flowers themselves.

Monotropa, "Indian pipe," has 1 or 2 species in



MONOTROPA UNIFLORA.

North America, Japan and the Himalayas. They are corpse-white or tawny fleshy herbs, with clustering stems growing to 6 inches or so high, and terminated by single or clustered flowers.

Hypopithys has also one or two species in Europe, Asia and North America. In England these plants are called "Bird's nests," and are often found in beech woods. They have a primrose or violet scent, which they retain when dry.

Sarcodes, *Newberrya*, and *Pleuricospora* are other monotypic plants of the tribe found in California.

The two tribes *Stypheliae* and *Epacrie* are abundant in Australasia, as are the heaths in South Africa, and it is remarkable that the tribes scarcely at all encroach upon each other's territory. It is remarkable, too, that comparatively few of the many fine plants allied to the Epacris have found their way into sub-tropical gardens. It is presumed they are well represented in the Australian Botanic Gardens, but in California, for instance, they seem to be scarcely at all grown. Several of the species have edible fruit considerably used in the colonies.

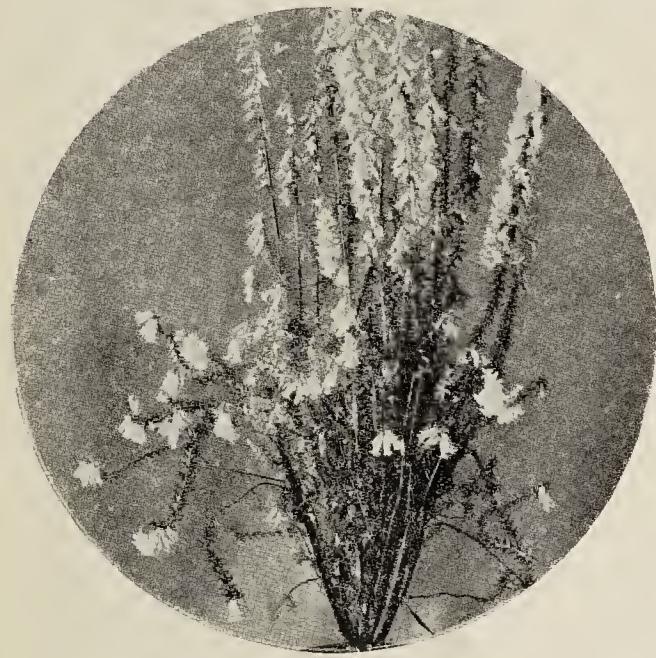
Styphelia is a genus of 11 species of Australian evergreen shrubs bearing crimson, pink, or greenish flowers.

Astrolobia in 18 species found in the cooler

parts of Australia and neighboring islands are often handsome shrubs. *A. humifusum* is the so-called "Tasmanian cranberry" with trailing juniper-like stems, handsome scarlet flowers, fruit of a greenish white, colored in the sun somewhat, and full of a pulp described as "apple flavored."

Leucopogon is a large genus of 130 species found in Australia, New Zealand, Malaisia and the Pacific Islands. *L. Richei* is the "native currant" of the Australians, found mostly on the maritime lands. It is credited with having preserved a French naturalist from hunger for several days, during the voyage in search of La Perouse. The species are mostly white flowered.

Epacris has 27 species in Australia, New Zealand, and New Caledonia. This number is much exceeded in dictionaries, which often give specific value to varieties. It is remarkable how seldom these handsome shrubs are met with in this country, or for that matter in the gardens of other countries where they might be expected to thrive. It is possible that they become starved, straggling and unsightly from want of proper care and attention to pruning, which is necessary to secure a proper sup-



EPACRIS HYACINTHIFLORA.

ply of thrifty, flowering wood. Their flowers vary in shades of crimson, purple, scarlet, pink and white, or the darker colors tipped with white.

James MacPherson.

A WOODLAND PATH.

A pathway like the one in the illustration would be a proud possession for any park, but it is one that few can show. Time and being let alone have made it what it is—a softly carpeted, arched cavern of shade leading the eye to a sunny opening at either end, the high light of the one being the

sunlight on a clump of sand cherry trees, standing in a woodland opening, of the other (shown in the picture) a distant glimpse of the sparkling waters of Grand Traverse Bay. For this is one of the



A SYLVAN ARCHWAY.

lovely natural landscape bits that abound on the narrow and charming strip of land known as Grand Traverse peninsula, which extends from the mainland on the head of the bay northward for almost half its length, dividing the upper waters into nearly equal arms called respectively, the East and the West Bays.

But had this pathway been found on land that had been brought under the supervision of the right kind of a Park Superintendent, instead of on Nature's broad domain, it would have been still more perfect in its way. For directly across it a tree had fallen, making a view of its most perfect part impossible. A few of the larger branches that strewed its shadowy carpet of fallen leaves and twigs might have been removed without injury too, and probably Mr. Simonds would have some of the trees cut out, especially among the smaller ones. On the whole, however, I should say there was more danger of spoiling the dreamy effect of this sylvan archway by overdoing than by letting well enough alone.

Frances Copley Scavey.

THE ARBOR-VITAE AMERICANA.

THUJA OCCIDENTALIS.

This beautiful native evergreen is the hardiest of the class, which numbers many that are unique and exquisitely lovely. *Arbor Vitæ Americana* is called the "white cedar" in some sections, but is not, by any marks of similarity, a juniper, but a true *thuja*.

Growing wild on the banks of the Hudson river and in the Eastern states, and producing seeds in cones that germinate rapidly, the tree has become widely disseminated over the United States. It naturally grows from ten to twenty feet high, in conical shape, branching low down on the trunk, but it was so popular for yard, garden, park and cemetery planting that it has been trained and pruned into as many sizes, styles and shapes as the various tastes and places it occupied may have demanded.

Allowed to attain height, the trees form wind-breaks for other shrubbery that combine beauty and utility. Isolated *Arbor Vitæ* trees naturally incline to pyramidal shape, gracefully spreading their broad, fern-like, flat branches at the base and without losing the characteristics of the foliage, assuming a more upright form toward the summit.

Like other balsamic conifers, it assumes a dark, somber shade of green, sometimes of a brownish cast, during the winter, but contrasted with the surrounding dearth of verdure, and snow-covered ground, the scenic effect is fine. And early in springtime the new growth begins, changing the somber foliage to bright green.

The *Arbor Vitæ* is subject to but few diseases, and Mr. P. J. Berckman, the well-known President of the Pomological Society of America, says it is only the *Biota aurea nana* and others of the Asiatic section that are attacked and injured by the red spider, but Mr. Seelye, of *Vick's Magazine*, says the *Arbor Vitæ Americana* in Rochester, N. Y., has been depredated upon by insects that have destroyed the comely appearance of the plants without causing death and destruction.

The experience of the writer is similar to Mr. Berckman's. In the course of thirty years none of the *Arbor Vitæ* trees, hedges or wind-breaks has shown tendency to disease, and with one exception all have been free from the attacks of insects. (This applies to the one hardy variety under discussion.) The one instance occurred in 1888, in Mississippi and Alabama, when Cedars and *Arbor Vitæs* were covered with what entomologists called the "basket" worm. It wove itself securely in a small cocoon that was fastened to the tender branches or leaves. The substance of the trees was sapped and hundreds in various sections were

killed. So insidious was its approach that the first knowledge of its existence was the yellow, sickly appearance of evergreen trees.

Such depredations can hardly occur in well tended arboreta, parks or private grounds. As soon as the cocoons were discernible swinging from the under side of the branches, pruning scissors and other effective agents were employed to dislodge them. It was in the forests, waste places, and on old home sites where gardens had once been decorated with *Arbor Vitæs* and cedars that the basket worm destroyed so many fine trees. It never returned, and this was its first advent in these two states. *Arbor Vitæ Americana* stands in the front rank of hardy, handsome evergreens, available over many sections of the country, or to quote Mr. P. J. Berckman, "from Canada, South."

G. T. Drrennan.

THE MOST EXTRAORDINARY OF MEN.

The gardener is the most extraordinary man in the world, because no man has more business upon thyme, is master of the mint, and raises his celery every year. And it is a bad year indeed that does not produce a plum. He meets with more boughs than a minister of state. He makes raking his business more than his diversion, as many fine gentlemen do, but he makes it an advantage both to his health and fortune, which is the case with few others. He indulges in his own pleasures, and though he is plain in his own dress with his bachelor's buttons, yet he encourages his cox combs with prince's feathers, greatly admires the pride of London, and with pleasure admires his love lies a bleeding under a weeping willow. His wife, notwithstanding, has as much of lad's love and heart's ease as she can desire and never wishes for weeds. Distempers fatal to others never hurt him, for he walks the better for the gravel and thrives most with a consumption. He is nature's assistant, and is as famous for his balm of Gilead, female balsams and genuine drops as an apothecary, and his thrift abounds by his honesty. He is a great antiquary, having in his possession Adam's needle, the tree of life, Jacob's ladder, Solomon's seal, the holy thorn, Venus' looking-glass, the arms of France, and crown imperial. He is well acquainted with the globes, and has crossed the line oftener than any mariner in Great Britain. He is king of spades, and is happy with his queen, has more laurels than Alexander the Great, and more bleeding hearts than your beautiful Queen Mary. He can boast ladyship, but his greatest pride and this world's envy is that he can have yew whenever he pleases.—*New London Magazine*.

* PARK NOTES. *

McKeesport, Pa., is looking up Park matters. The City Council has appointed a committee to select a suitable tract for park requirements.

* * *

Utica, N. Y., proposes to expend some \$110,000 for land in New Hartford and Utica, five acres in area for park purposes. In addition to this \$50,000 is to be spent on improvements.

* * *

A tree planting organization has been effected in Kansas City, Mo., with Dr. Brummell Jones, president, and Col. H. J. Latshaw as secretary. Like many other cities Kansas City has suffered both by the neglect of this important feature of municipal economies, and the abuse of the standing trees in existence. The report of the preliminary committee, was a very thorough discussion of the leading points of the subject, and could not fail to impart a clearer idea of the duties of the proposed organization and the broad field of work open to its influence.

* * *

A large meeting of prominent Baltimore citizens was held last month to elect officers and adopt a charter for a Municipal Art Society, which is to be similar to organizations of like name in Boston, New York and Philadelphia. The object is to provide sculptural and pictorial decorations for the public buildings and parks. Those interested think that at least 2,000 members can be enlisted, who would furnish an annual revenue of \$10,000, an amount sufficient for several years, or until the sum grew large enough for the purchase of some highly artistic decoration.

* * *

At the recent meeting of the Board of Trustees of the Fairmount Park Art Association, Philadelphia, Pa., the following officers were elected to serve for the current year: President, John H. Converse; Vice-presidents, Joel J. Baily, Frank Thomson, Dr. Charles C. Harrison, William W. Justice; Treasurer, James W. Paul, Jr.; Secretary, Colonel Charles H. Howell; Counselor, James M. Beck. The committee on Grant Memorial is perfecting arrangements for the unveiling of the equestrian monument in Fairmount Park on General Grant's birthday April 27 next.

* * *

It is interesting to note that as we break into the year the subject of trees in our cities is receiving very marked attention, in a certain sense throughout the country. Quite a stir has been made in Atlanta, Ga., over the despoliation of the shade and ornamental trees of that city by the telephone and telegraph line men. These men as a rule have no consideration whatever for the tree and break and break away, regardless of appearance or consequences, any parts which may either momentarily or permanently interfere with their operations. The Council is investigating and as that body is deeply interested some corrective legislation will be enacted.

* * *

Riverside Park, Hartford, Conn., which was dedicated last fall, is a park for the poorer people of the city. It extends along the Connecticut river within easy distance of the tenement districts, and the women and children who cannot get out of the city in midsummer will find within its attractive limits a real breathing-spot, with plenty of trees, comfortable benches and a shady pavilion, from which a good view of the river can be obtained. It is intended that the park shall not be one of the "keep-off-the-grass-kind" and the children will be permitted to roam over lawns at will, and the smaller ones to paddle around and sail their miniature ships in a shallow pond, an acre or two in extent, where the water is never more than fifteen inches deep,

and the bottom has been covered with clean sand. This is somewhat of a departure in the line of city parks, but will have to be repeated in degree in every city, where the working classes have been overlooked in such righteous climes.

* * *

Salt Lake City, Utah, has not progressed as other cities in the matter of its parks. Mr. A. Schulthess, superintendent, informs us that the city has only one park of importance, called "Liberty Park," which is a level tract occupying ten square blocks, an area of 105 acres. In the early 50's Brigham Young, the owner of the land, raised a large patch of locust, part of which he sold and allowed the rest to remain. Some Box Elders were also planted and the rest was used as a farm. In 1882 work was commenced in laying out the grounds as a park. The City only spends on park work some \$3,000 a year. The park has some 5 acres of lawn, and a number of flower beds. There have been planted out some shrubbery, and evergreen and other trees; a pond has been created and a good-sized greenhouse constructed. The superintendents have been changed with the politics of the administration. Mr. Schulthess had charge from 1882 until 1891, while from 1891 to 1898, four different men occupied the position, and in 1898 Mr. Schulthess was again appointed. Another block of ten acres near the center of the city has been set apart for park purposes on which work will be begun this spring. Although the law provides for park commissioners none have as yet been selected.

* * *

Tacoma, Wash., prides itself on its park possibilities. Besides Wright Park, in the town proper, it possesses a natural park comprised by a peninsula, Point Defiance, of 740 acres which juts into the bay north of the city, and which is covered with the magnificent conifers for which Washington is famous. Its shores alternate with level, shingly beaches and wave-beaten cliffs facing the open Sound. The greater part of this woodland is still in its primeval picturesqueness, but for a long distance along the shore and approach nearest the city it has been improved and paths made from the water's edge back into the green recesses of the forest. The scenery is very varied as may be surmised and all the shrubs for which Washington is noted grow in riotous confusion. The Tacoma *Daily Ledger* says the exquisite tasseled flowers of the white "Spirea" fill the entire forest, and white syringia grows wild along the banks. Wild coral honeysuckles and snowy flakes of dogwood blossom form part of her summer offering, and she has given the sowers of fern seed "carte blanche." It is reached by the City Park car line, which makes half-hourly trips from the city six miles distant, and excursion steamers ply along the shore. Almost in the center of the city, is Wright Park, a garden of delights. The grounds, twelve blocks in area were given to the city by the late C. B. Wright, of Philadelphia, and were laid out by E. O. Schwagerl the well-known landscape gardener. On one side a high terrace extends the full length of the park, commanding a broad view of the green slopes below and the residence district of the city beyond. These heights are imposingly planted out with evergreens and other material. On a bold promontory overhanging the lawns stands a winged Mercury, the gift of Col. C. P. Ferry who also donated the colossal lions which guard the entrance of the carriage drive from Sixth avenue. These figures are copies of the famous lions of Brussels. At the other end of the drive Canova's dancing girls welcome the visitor. The lower meadows of the park are dotted here and there with groups of trees and ornamental shrubs in endless variety, and from early March until December there are bright flowers in the beds, and in the spring the slopes are all afire with the golden Scottish broom. In the center are two little lakes peopled with flocks of ducks and snowy swans and a rustic bridge spans the strait between the two lakes."

CEMETERY NOTES

In the present session of the legislature of Illinois a bill introduced by Senator Campbell has been reported favorably which provides "that it may be willed or decreed that a lot in a cemetery shall not be disposed of by the heirs at law."

* * *

Oakland cemetery, Atlanta, Ga., is experiencing the progressive tendency of the times and the general council has appropriated funds for the construction of a new office building. Some five or six thousand dollars will be invested in securing an appropriate and commodious structure.

* * *

Messrs Rutan & Russell, architects, have prepared plans for a stone entrance, to cost about \$15,000 which is to be erected this year by the Homewood Cemetery Association, Allegheny, Pa., on the Beechwood boulevard at its junction with Forbes street. The work will be commenced as early as possible.

* * *

Plans have been prepared for Mr. John C. Larwill, of Mansfield, O., for the erection of a memorial mausoleum to his parents and family to cost \$20,000. Mr. Larwill's parents as well as members of his immediate family are buried at Wooster, O., and the structure will be erected in Wooster cemetery.

* * *

In ancient times burials were always outside the walls of a city or town. Indeed, before the time of Christianity, it was not lawful to bury the dead within the limits. About the end of the sixth century St. Augustine obtained of King Ethelbert a temple of idols—used by the king before his conversion—and made a burying place of it and St. Cuthbert afterward obtained leave of the pope (A. D. 725) to have yards made to the churches suitable for the burial of the dead.

* * *

Reuben J. Smith, an eccentric character who had been a resident of Amesbury, Mass., for many years, died at his home January 24th. Of his many peculiar acts, the one that attracted the widest attention was the building of a tomb, completed several months ago. In this tomb was an iron chair and Mr. Smith requested that after his death his body should be placed in the chair in a sitting position, the door securely locked and the key destroyed. This will be done.

* * *

The Riverside Cemetery Association, South Norwalk, Conn., has had plans prepared by Mr. Arthur N. Paddock, architect, for the erection of a gate lodge at the main entrance of the cemetery, in Riverside avenue. The structure will be of granite, one story in height, 21 by 31 feet, and will cost about \$2,500. The design includes two good sized rooms, one to be used as a reception room and the other as the superintendent's office. There will also be lavatories.

* * .*

A bill has been drafted by the District Commissioners of Washington, D. C., as a substitute bill regarding the tax question in relation to churches and cemeteries. Section 2, reads as follows: "That the ground of duly incorporated cemetery associations in the District of Columbia, dedicated and used solely for burial purposes, and not held for private income or profit, and all lots in said District actually used for burial purposes, shall hereafter be exempt from the payment of general taxes and assessments, but if any portion of said grounds or lots is larger than is needed for their legitimate purposes, then the excess shall be listed for taxation."

* * *

A bill which should tend to the protection of southern burial grounds from ruthless and careless spoliation has just passed

the South Carolina senate. It reads: Section 1. That from and after the approval of this Act any person or persons who shall wilfully obliterate or desecrate, any grave, or shall wilfully destroy, deface or remove any gravestone, or shall wilfully destroy, tear down or injure any fence or other enclosure of any graveyard, shall be guilty of a misdemeanor, and, upon conviction shall pay a fine of not more than one hundred nor less than twenty-five dollars, or be confined in the county chain gang not more than thirty nor less than ten days.

* * *

The directors of the Ballston Spa Cemetery Association, Ballston Spa, N. Y., have adopted the following regulations for the care of lots: "An annual charge of one dollar will be made for the ordinary care of each half lot and a proportionate rate for full or larger lots. For the permanent care, a deposit of fifty dollars will be received for a half lot, and larger lots in the same proportion. Additional care will be taken upon the payment of larger sums, as the lot owners may desire." Viewing the very rapid decline in the value of money; a continuous word of caution is advisable in this connection. Cemetery trustees should carefully investigate this subject before making rules to govern it, or failure to fulfill obligations in the comparatively near future will inevitably result.

* * *

The old Pottawattomie chief, Simon Pokagon, who had a pretty hard time in life trying to conserve the rights of his tribe, and who died last month, was followed by a hard fate in his burial. Bishop Foley of Detroit refused to allow his remains to be laid away in the Catholic cemetery at Silver Creek by the side of his first wife and two children because Pokagon was living with a divorced woman, contrary to Catholic rules. Neither were the funeral services allowed to be held in the Catholic church. The services were held at the Mix home, an Indian residence near Hartford, Mich., conducted by Attorney Engle. Pokagon's lawyer and Fr. Joos of Dowagiac overtook the party on the way to the cemetery and gave permission to place the remains in the potter's field of the cemetery at Silver Creek.

* * *

Workmen while excavating upon Goat Island, Oakland Calif., recently, preparatory to the building of the Naval Training School, struck a forgotten Indian cemetery and unearthed several aborigine skeletons, as well as pestles, mortars, stone pipes and other implements used by the savages. The first of the remains unearthed, that of a male over six and a half feet in height, was found in a sitting posture, the knees being doubled up to the chin. The location of the ancient cemetery is on the eastern part of the island between the light and buoy station, directly within the cove facing the long wharf. The discovery was entirely unexpected, though it immediately recalled to the minds of old settlers that Indians were known to have had burial grounds upon the island. In all twelve skeletons were unearthed.

Cemetery Reports.

The annual report of the Little Lake Cemetery Co., Peterborough, Ontario, is always interesting. For a town of some 10 or 12 thousand inhabitants, it is very commendable and suggestive to similar places, that such care should be manifested in all the details of the superintendent's work as is shown in Mr. W. H. Foord's report. There is evident intention to bring about reform so as to come as near as possible to modern ideas. In many of the sections the mounds, grave and lot markers have been levelled so as to admit of lawn mower work, and it is recommended in the report that no markers in the future shall interfere with the work. Hedges, fences and copings are also receiving attention, and the landscape plan is gradually interesting the lot owners. The receipts for the year were \$2240.95 and the expenditures \$1649.47.

The annual reports of Mount Royal Cemetery Company, Montreal, Canada, to date Nov. 30, 1898, gives the following: Number of interments for year 1223. The receipts for the year were \$30,138.85 and the disbursements \$23,404.45. The invested funds amount to \$35,206. The death of the late superintendent Mr. Frank Roy was appropriately noted and his son Mr. William O. Roy, was appointed to succeed him. In the course of the latter's report he says: The grass-cutting, as usual, has been an important and expensive feature of the year's work, and it is hoped that the new rule, inaugurated during the year, of doing away with all enclosures on lots under four hundred feet, will tend to keep the expenses of this branch of the work from increasing at such a rate as has been the case for the last few years. The greenhouse is a paying investment. The expenses for this department of the work was \$1,560 and the receipts \$3,774.

* * *

The 67th annual report of Mt. Auburn cemetery, Boston, Mass., gives the conditions of the several funds as follows: The Repair Fund was increased during the year by \$48,402.55, making a total of \$986,289.44; the Permanent Fund is now \$389,799.32, an increase of \$11,626.34; the General Fund now equals \$119,810.91, which has been decreased \$20,358.05 by expenditures for completing chapel and office buildings. The total cost of these buildings was \$68,047.99. The subject of providing means for cremation is being considered by the board, a general law for the purpose having been passed by the legislature. The total receipts for the year were \$142,195.99, which includes: Sales of lots \$13,416.75, labor and materials on lots \$57,488.77, receiving tomb \$1,088. The total expenditures were \$154,957.51, which includes: Labor, \$36,973.98; materials, \$14,175.51; salaries \$7,300, office, \$2,326.68. There were erected 312 headstones and 50 monuments. Two tombs, 12 iron fences and 6 granite curbings were removed. 478 interments were made, during the year making a total in the cemetery of 32,415.

* * *

The 61st annual report of the Rural cemetery, Worcester Mass., to Dec. 31, 1898 has been presented by the trustees. The perpetual care fund now amounts to \$78,149.39, being an increase of \$1324.09 for the year. The general fund, which may be used for any purpose within the discretion of the trustees, amounts to \$81,928.34. Foundations for monuments put in during the year, 38: lots graded, 13; stone curbs taken out, 5; iron fences removed, 2; number of burials, 96. The report says: In the early years of this cemetery the same custom obtained here as elsewhere. of using iron fences by way of protection to the individual lots. These were in time succeeded by stone curbs, which by their too common use became unattractive and even unsightly. Now the prevailing sentiment of the day seems to say that, as neither is any longer necessary for protection, good taste does away with both iron fence and stone curb, and prefers as more grateful to the senses beautiful trees, shrubs, flowers or turf. Generally speaking, the monuments themselves furnish all the opportunity needed for the judicious use of either stone or marble. Therefore new iron fences or stone curbs are no longer permitted, and old ones are being taken out wherever possible. A considerable amount of planting of trees and shrubs has been accomplished during the year.

* * *

The annual report of the Commissioners of the North Burial Ground, Providence, R. I., recently presented to the Common Council declares the condition of the cemetery to be better in all respects than ever before. The receipts for the year amounted to \$38,501.69, and the expenditures for labor and material to \$26,300.09. During the year the new marble entrance on North Main street was completed. On either side of the steps is a white marble balustrade with an ornamental marble terrace

in the centre, the whole forming quite a feature in this section of the grounds. The banks on either side are adorned with plants and shrubs, adding very much to the attractiveness of the place. Among the improvements executed during the year was the construction of a new greenhouse, a model one, equipped with all the latest appliances. The new house is 100 by 30 feet, with steel frame supporting large glass lights. The cost of the greenhouse and appurtenances were \$2,070. The chapel has also been renovated and refurnished, and extensive improvements have been made in the old part of the cemetery. The work of replatting the grounds and preparing a catalogue is in progress. The receipts for the perpetual care fund in 1897 were \$4,000 greater than in any previous year, and it is interesting to find that even a better record was made in 1898.

* * *

Reports presented at the annual meeting of the Mountain View Cemetery Association, Oakland, Calif., show that there were 980 interments made during the year 1898, making the total number of interments in the cemetery to January 1, 1899, 18,060. There were 138 lots sold during the year and the cash receipts were \$57,197.28; expenditures, \$52,123.89; amount placed in perpetual care fund, \$12,764.75; amount placed in the perpetual guarantee fund, \$1,440; total amount in the perpetual care fund on January 1, 1899, \$86,866.55; total amount in the perpetual guarantee fund on January 1, 1899, \$23,986.54. The variable rainfall of the locality necessitates the use of storage reservoirs, and a large addition to the existing provision was made during the year. The total expense of these improvements, including water supply and service extensions amounted to \$15,000. Speaking of the further improvements, Mr. A. D. Smith, superintendent, says: "The lower faces of the dams, as well as the slopes at the sides of the lakes, will be planted in ivy, which will soon cover the ground, and with its rich verdure give a pleasing effect. The ivy, too, will prevent the washing of the slopes during the rainfall, its over-lapping leaves affording a rain shed similar to the shingle on the roof. Then, too, the bitter acridity of the ivy will prove wholly unattractive and distasteful to squirrels, gophers and moles and thus prevent burrowing, and consequent injury to the dams, by those annoying and dangerous pests."

CORRESPONDENCE.

WILMINGTON, DEL., Jan. 31, 1899

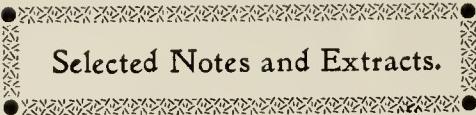
Editor Park and Cemetery.

DEAR SIR: I wish to offer a word of encouragement in regard to those pamphlets issued at our last convention concerning Sunday Funerals. We have been distributing them among our clergy and others, and I find it is beginning to bear fruit. The clergy called a meeting the other evening at which some fifty were present, out of a total of sixty-two ministering in our city. The following is the resolution passed at the meeting:

"Resolved, That we express ourselves as opposed to funerals on the Lord's Day and urge our people to select another day for such services, and in all cases to confer with the pastor before arranging the hour. The time required for such ministration often interferes with other services, which, owing to regular order or special announcement, cannot be changed. We earnestly request the hearty co-operation of the laity in this matter."

They have also elected a committee to call on all the undertakers asking their co-operation in the matter. I would like my fellow superintendents to see that we have the sympathy of the clergy in this matter.

*S. C. Penrose, Supt.,
Washington and Brandywine Cemetery.*


Selected Notes and Extracts.
Dwarf Trees.

One of the most remarkable features of Japanese gardening is the way in which every plant and tree in a famous garden will be reproduced in miniature, by a system of dwarfing which has been handed down from many generations back. Every characteristic of a large tree will be preserved, the foliage the color and the texture of the branches, and yet the miniature copy will often be not more than from 1 to 3 feet high. Prof. C. E. Bessey of the University of Nebraska, tells of a case in this country in which nature has eclipsed the art of the Japanese. While climbing Green Mountain, near Boulder, Colo., Prof. Bessey found growing from a crevice in one of the rocks at the summit a small pine, about $5\frac{1}{4}$ inches high, and barely a quarter of an inch in diameter. It was unbranched and bore a single terminal tuft of leaves. The tiny tree had made a good fight for existence amid the inclemencies of its exposed situation, for when it was carefully examined twenty-five distinct annual rings were discovered. Such a case of natural dwarfing is almost unprecedented.

* * *

To Destroy Gophers and other Burrowing Animals.

The best and most effective method of destroying pocket gophers and most burrowing animals is by the use of bisulphide of carbon. This poison is cheap, easily obtained, and if applied thoroughly the results are usually satisfactory. A fresh hole should be selected or a burrow opened near a point where a fresh hill has been thrown up. A bunch of cotton waste, rags, or similar material, saturated with two tablespoonfuls of bisulphide should then be thrust well down into the hole and the opening closed. The gas which is formed soon fills the hole and will penetrate to the more distant parts of the burrow and suffocate the occupants. On sloping ground the poison should be introduced at the highest point since the gas being heavier than air flows, like water, to the lowest part of the hole. The main difficulty in using this poison is that the burrow may be long or may be filled with earth and the animal will be beyond the reach of the fumes. In this case the bisulphide should be introduced at several points and if necessary the operation should be repeated. Crude bisulphide specially prepared for this purpose can be obtained from some manufacturing chemist. It has a powerful odor, is inflammable and more or less explosive. Care should therefore be

taken when handling it, not to open it near a light, but otherwise no danger attends its use.—JAMES WILSON, Sec'y of Agriculture.—*The American Florist.*

* * *

Garden Fences.—Painting Tree Wounds.

The old idea that a garden is a place in which to retire from the world and enjoy our pleasures was rather a selfish one. To enjoy a garden in the olden time was to retire between high walls or dense hedges, through which no prying eye could penetrate. The modern idea is to have everything exposed to public view, and this is probably as great an extravagance in one direction as the old prison wall system was in the other. In many of the suburbs of our cities, the idea of no hedges, fences or other boundary marks to gardens has prevailed to a great extent. The lawns and gardens have no boundary marks between them and the public streets; the driveway is made to appear as a portion of some great public park. Certainly this gives some advantage to the general traveller; but it does seem that one cannot abolish the idea of the "mine" and "thine" in human nature; and to give up one's garden to the public as if it belonged actually to them is a violation of a proper sentiment in human nature. A low hedge or ornamental fence of some kind, which does not absolutely exclude our garden treasures from the public, but yet marks a distinction to that which is ours, and that which is everybody's, seems more in accord with the proper order of things. The total abolition of these line fences or garden boundaries does not seem to be natural, and therefore not to be recommended.

* * *

Many a valuable tree is lost by the neglect to paint the scar left where a branch has been sawn off or broken by the wind. Insects and fungi will also destroy patches of bark on the trunk of trees, and the wood will rapidly decay, and the trunk become hollow. To prevent this rotting, exposed wood should be painted, dead bark taken off and the wood beneath also painted.

The object is to prevent decay till the new wood grows over it.—*Meehan's Monthly for January.*

* * *

Roses in the Cemetery.

On the subject of roses in the Cemetery, the *Florists Exchange* strikes a note not usually heard, but which is of value; it says: "Roses are undesirable subjects to plant alongside a Cemetery path where freshness is so much desired. No matter how careful or skillful the selection may be you will not be able to get 200 plants to flower all summer and give any degree

of satisfaction. While there are certain roses for which continuous bloom is claimed, there can be no getting away from the fact that at mid-summer the plant looks cloudy and shows very little bloom. Such a condition is hardly desirable for a cemetery path. Take, for instance, that most popular of all cemetery roses, Mme. Planter. In the spring this variety produces a gorgeous mass of bloom, and as an isolated plant for grave work, gives much satisfaction in its one great effort. Place the same rose in a line along the path we venture to say the result would be tiresome and objectionable to many. The favorite General Jacqueminot would also be attractive only while in flower. Splendid results can be obtained for spring and early summer by making lines of Crimson Rambler or any other trailing roses; but again there would be the same objection after the blooming season. Rosa Wichuriana has some advantage over many trailers, in as much as it is evergreen and also maintains its foliage during summer months better than some; but even this variety often becomes unsightly. It is far more advisable to make groups or beds of such roses as may be selected, always making sure that the beds will not be in too conspicuous a place where they will show when out of bloom. Climbing or trailing varieties show to advantage when covering rocks, dead trunks of trees, or arches. The question is asked what is best to cover an arch or gateway that will always be green and bloom in summer. If roses are wished R. Wichuriana or some of the hybrids from this type are recommended. If so much value was not placed on the subject selected being evergreen, we should recommend Actinidia polygala. This plant makes the finest arch of anything we know. Lonicera Halleana makes a good evergreen cover and has the advantage of flowering freely in the summer."

* * *

Nature in Landscape Art.

It is not always possible to save all the delightful parts of a natural landscape, in making a new home on a suburban lot, or, in the country proper; but, if the heart of the landscape gardener is right and he has sufficient skill, he can do much to preserve the beautiful. It certainly becomes him, and is worthy of his deepest study, to appropriate without destroying the gems of beauty which it has taken many years, if not ages, to create. Let those who may be entrusted with the planning of country places give more heed to the inspiration of nature and less to those of art. Indeed, it is the truest and highest art that uses and does not abuse the beauties of nature.—*H.E. Van Deman*, in *Meehan's Monthly*.

Association of American Cemetery Superintendents.

ARTHUR W. HOBERT, "Lakewood," Minneapolis, Minn., President.
WM. STONE, "Pine Grove," Lynn, Mass., Vice-President.
F. EURICH, Woodward Lawn, Detroit, Mich.
Secretary and Treasurer

The Thirteenth Annual Convention will be held at New Haven, Conn.

The American Park and Out-Door Art Association.

CHARLES M. LORING, Minneapolis, Minn.
President.
WARREN H. MANNING, Tremont Building,
Boston, Mass.
E. B. HASKELL, Boston, Secretary
Treasurer.

The next meeting of the Association will be held at Detroit, Mich.

Publishers' Department

Park Commissioners and Cemetery Trustees are requested to send us copies of their reports.

Photographs and descriptive sketches of interesting features in parks and cemeteries are solicited from our readers.

Notice.

Owing to the annoying disappointment in not receiving the stenographic transcript of the Omaha proceedings until some time in December last, the printed report was correspondingly delayed.

The same is now ready and may be procured at rate of 20c. per copy.

We wish to call attention again to the book *MODERN CEMETERIES*, which should be in the office of every cemetery, and in the library of every cemetery official.

The book will be mailed at rate of 50c. per copy. Please remit with order and acknowledge receipt of book.

Frank Eurich, Sec. & Treas.

604 Union Trust Bldg., Detroit, Mich.

A meeting of the Boston Gardeners' and Florists' Clubs, was held at Horticultural Hall, February 7th, Prof. Wm. P. Brooks of the Massachusetts Agricultural College delivered an address on "What Plants Feed Upon and How to Feed Them."

Mr. John G. Barker is now located at South Bend, Ind., where he is about to develop a park for the South Bend Traction Co.

The two last lectures of the season of the Massachusetts Horticultural Society, at Horticultural Hall, Boston, will be Market Gardening, March 11, and Horticulture in Japan, March 8.

Queen Victoria conferred the order of Knighthood upon William Turner This-

elton Dyer, Esq., Director of the Royal Gardens at Kew, who has just been made an ordinary member of the second class, or Knight Commander of the Most Distinguished Order of St. Michael and St. George. The *Gardeners' Chronicle* says the honor conferred is timely and appropriate, as it coincides with the completion of the great Temperate house in the Royal Gardens. Another change which has occurred is that Mr. J. G. Baker has retired from the post of Curator of the Herbarium in accordance with the regulations relating to age laid down by the Civil Service Commissioners. It is believed that Mr. Hemsley will take up Mr. Baker's duties.

American Park and Out-door Art Association. Second Report, Minneapolis, Minn., June 22-24, 1898. This report contains the full proceedings of the convention held in Minneapolis last year, and in addition thereto the Constitution, By-laws and other information connected with this timely association. The pamphlet of 164 pages presents within its covers a mass of information and instructive suggestion invaluable in this time of social progress. Many of the papers bear directly on phases of every day life, as regards the relations of man to nature, the inculcating into the minds of the young an understanding and love for those national objects which affords such relief from the monotony of every day cares—trees and flowers, and the possibilities to be acquired by enlightened work in the promotion of art out-of doors. Membership in the association is open to all interested in the work, and the next convention to be held in Detroit is likely to still further emphasize the claims of the association upon the community for sympathetic interest and support in the great work of improving our natural surroundings.

THE METRIC SYSTEM. Published by the Hartford Steam Boiler Inspection and Insurance Co., Hartford, Conn. Pocket size $3\frac{1}{2}'' \times 5\frac{3}{4}''$, sheepskin, postpaid \$1.25; leather, printed on bond paper gilt edges, \$1.50.

This very handy little volume is a valuable labor saver and reference book, in all ways where the necessity of dealing with the meter as a unit of measurement is concerned. Its mission is well expressed in its preface: "The metric system of weights and measures is used so universally in foreign books and periodicals, that much time is consumed, and no little annoyance incurred by the American reader, in translating these units into their English and American equivalents, by the aid of any of the reduction tables that have yet been published. It therefore occurred (to the publisher) that a handy pocket volume, for facilitating comparisons of this kind, might be acceptable to engineers and scientific workers generally." The little book contains 196 pages and opens with a discussion of the

diversity of systems in use a history of the meter, and units derived from the meter. The bulk of the book consists of tables, giving the interchange between our standards of measurements and metrical values and vice versa, carried out to a reasonable decimal. The question of adopting the meter as a standard in this country has been agitated a number of years, but we see less reason for it to-day than when the subject was first broached. It would undoubtedly be a great convenience to adapt on of our own standards to metrical expansion, if concerted action were taken to compulsorily legalize such a movement, but although we have had a practical apprenticeship in metrical measurements in France and elsewhere, we still retain the opinion that it would be preferable to adopt a unit of our own, inviting other countries to study it, than to attempt so radical and from a certain standpoint unnecessary evolution, as the introduction of the meter would entail our local conditions. This view does not detract an iota from our opinion of the little work before us, which will be found to be a welcome help, of frequent service to the intelligent.

RECEIVED.

City of Cambridge, (Mass.) Park Department. Annual Reports 1898. Illustrated with a number of photogravures.

Sixty-seventh Annual Report, Mount Auburn Cemetery, Boston, Mass.

Annual Report of the Park Commissioners of the City of Taunton, Mass., for year ending Nov. 30, 1898. Illustrated with half tones.

CORNELL UNIVERSITY AGRICULTURAL EXPERIMENT STATION, Ithaca, N. Y. Bulletin 156. Third Report on Potato Culture By I. P. Roberts and L. A. Clinton.

Bulletin 157. The Grape Vine Flea-beetle. By W. V. Slingerland.

Bulletin 158. An inquiry concerning the source of Gas and Taint producing Bacteria in cheese curd. By V. A. Moore and A. R. Ward.

Bulletin 159. An effort to help the Farmer. The Fifth Report to the Commissioner of Agriculture of Progress of Work under the Nixon Bill to promote the extension of Agricultural Knowledge.

Bulletin 160. January 1899. Hints on Rural School Grounds. By L. H. Bailey.

Bulletin 161. January 1899. Annual Flowers. By G. N. Lauman and L. H. Bailey.

UNIVERSITY OF MAINE AGRICULTURAL EXPERIMENT STATION, ORONO, ME. Bulletin 47. Wheat offals sold in Maine in 1898.

Bulletin 48. Feeding Stuff Inspection. Schedule of Prizes offered by the Massachusetts Horticultural Society for the year 1899. With Rules and Regulations, general and special.

Report of Park Commission, Canton, O. Comprising a Brief History of Canton Parks copiously illustrated with half tone views. Courtesy of F. M. Reed, superintendent of parks.

A package of Ward's Celebrated Fertilizer for pot plants and flowers has been

received from the South Sea Guano Co., Boston, Mass. This is put up in the shape of small tablets, one of which is sufficient for an ordinary plant, and is very convenient to handle and use, being free from unpleasant conditions.

Mr. S. T. Parks, superintendent of Grove Hill Cemetery, Oil City, Pa., some snap shots of interesting monuments in that cemetery.

CATALOGUES.

The Storrs & Harrison Co., Painesville, O. Seeds, bulbs, plants, trees, etc.

Catalogue 1899. The Universal Horticultural Establishment. W. A. Manda, South Orange, N. J.

Wholesale Catalogue of the Waukegan Nurseries, Waukegan, Ill. R. Douglas' Sons, proprietors. Spring of 1899.

Dreer's Garden Calendar, 1899. Henry A. Dreer, Philadelphia, Pa.

D. M. Andrews, Boulder, Colo., 1899, Hardy Cacti, Colorado Wild Flowers, etc.

R. Douglas' Sons, Waukegan, Ill., starting originally as wholesalers, have recently added a general nursery stock of forest, ornamental and nut-bearing trees to their specialty of evergreens, and are now catering to the retail trade. They are growing for the United States Government, several hundred thousand trees, under contract. Our readers can obtain a price list by addressing the firm.

It is always good policy to deal with responsible growers, among whom Storrs & Harrison Company, of Painesville, Ohio, merit the consideration of our readers who may want fruit and ornamental trees, shrubs, roses, bulbs, plants or seeds. Catalogue will be sent free.



A HEDGE OF RUGOSA ROSES.—From the Catalogue of Hiram T. Jones, Elizabeth, N. J.

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